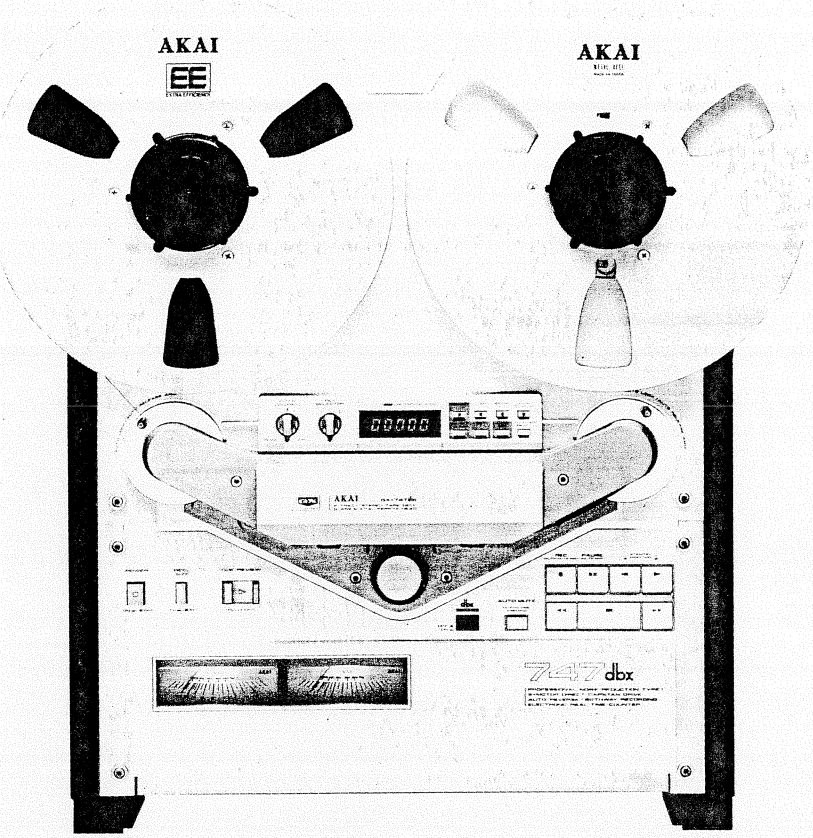
GX-747dbx

STEREO TAPE DECK

Notes:
* This manual is applicable to both silver and black panel models.
* Supply reel and tape shown in photograph not included in standard accessories.



WARNING

To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

Operator's Manual

AKAI

WARNING

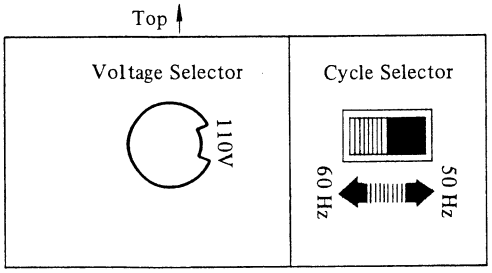
Power requirements

Power requirements for electrical equipments differ from area to area. Please ensure that your machine meets the power requirements in your area.
If in doubt, consult a qualified electrician.
110V/120V/220V/240V, 50/60 Hz internally switchable

Voltage selection

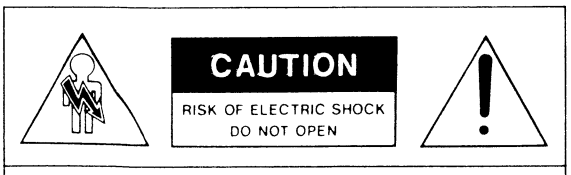
Do not attempt this conversion yourself.
Each machine is preset at the factory according to destination, but if you want to change the voltage refer the following voltage conversion to a qualified service repair shop or professional service personnel.

1. Disconnect the Power Cord.
2. Loosen the holding screws and feet with a screwdriver and remove the back panel.
3. Remove the Voltage Selector plug and reinsert so that the proper area voltage shows through the plug cut-out.
4. Set the Cycle selector located on the right side of the Sys. Con. P.C. Board according to the power source frequency for your area.



This equipment confirms to No. 76/889/EEC Standard.

PRECAUTIONS



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

- The lightning flash with arrowhead symbol superimposed across a graphical representation of a person, within an equilateral triangle, is intended to alert the
- user of the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.

- The exclamation point within an equilateral triangle is intended to alert the user of the presence of important
- operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. Use only household AC power sources.
   Never use DC power sources.
2. Touching the plug with wet hands risks dangerous electric shocks.
   Always pull out by the plug and never the cord.
3. Make sure the power consumption of each audio component does not exceed wattage specified on the rear panel.
4. Only let a qualified professional repair or reassemble the equipment. An unauthorized person might touch the internal parts and receive a serious electric shock.
5. Never allow a child to put anything, especially metal into this equipment. A serious shock or malfunction may occur.
6. If water is spilled on this equipment, disconnect and call your dealer.
7. Make sure the equipment is well ventilated and away from direct sunlight.
8. Keep away from heat (stoves, etc.) to avoid damage to the external surface and internal circuits.
9. Avoid spray-type insecticides which will damage the equipment and may ignite suddenly.
10. To avoid damaging the finish never use alcohol, paint thinner or other similar chemicals.
11. Always place the equipment on a flat and solid surface.
12. As the deck is quite heavy please be careful when handling the deck.
13. Please read this manual in its entirety and keep it handy for further reference.

PRECAUTIONS

FOR CUSTOMERS IN THE U.S.A.

SAFETY INSTRUCTIONS

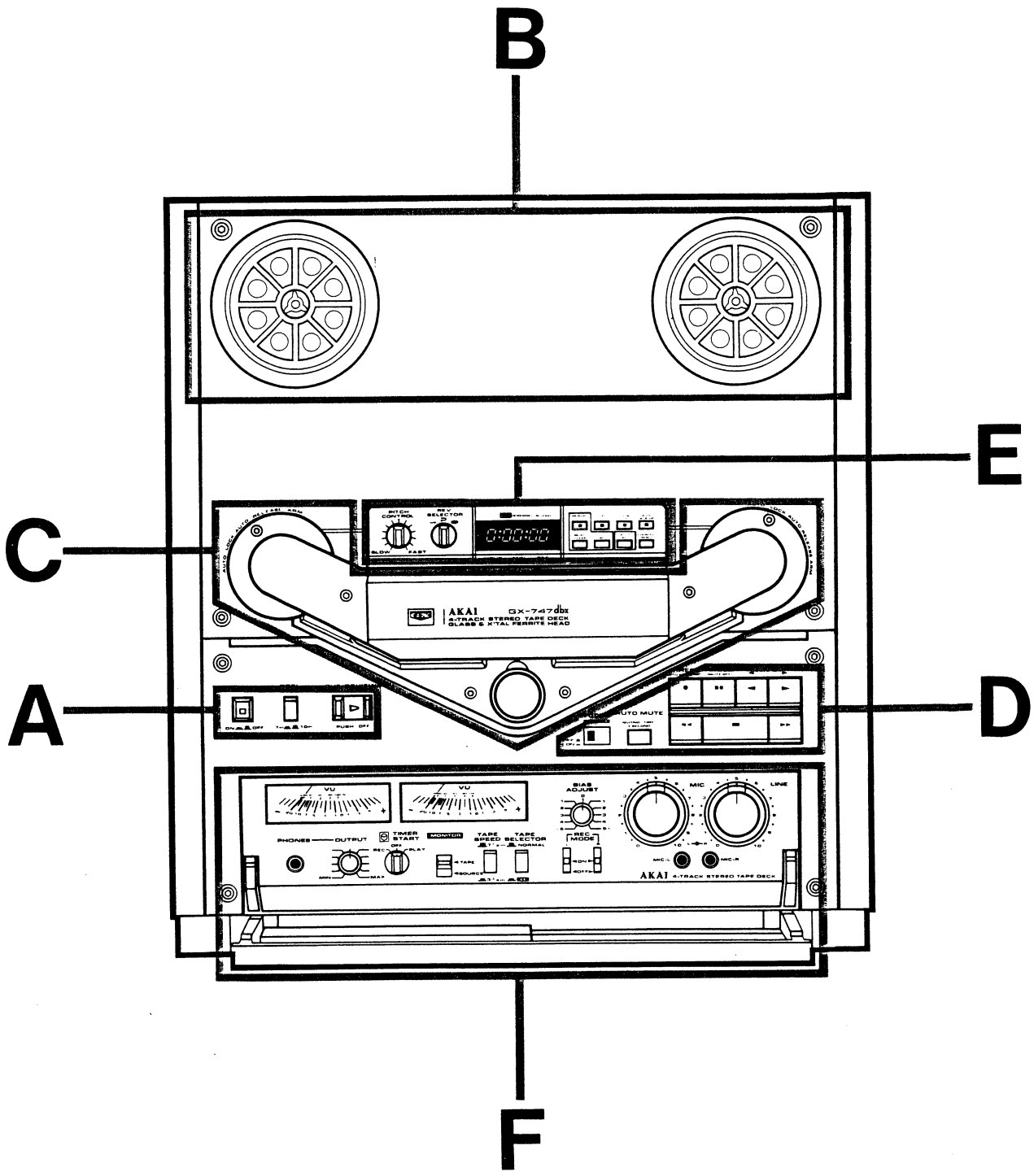
1. **Read Instructions** – All the safety and operating instructions should be read before the equipment is operated.
2. **Retain Instructions** – The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** – All warnings on the equipment and in the operating instructions should be adhered to.
4. **Follow Instructions** – All instructions for operating and use should be followed.
5. **Water and Moisture** – The equipment should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.
6. **Carts and Stands** – The equipment should be used only with a cart or stand that is recommended by Akai.
7. **Wall or Ceiling Mounting** – Akai does not recommend mounting the equipment on a wall or a ceiling.
8. **Ventilation** – The equipment should be situated so that its location or position does not interfere with its proper ventilation. For example, the equipment should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. **Heat** – The equipment should be situated away from heat sources such as radiators, heat registers, stoves, or other equipments (including amplifiers) that produce heat.
10. **Power Sources** – The equipment should be connected to a power supply only of the type described in the operating instructions or as marked on the equipment.
11. **Grounding or Polarization** – The precautions should be taken so that the grounding or polarization means of an equipment is not defeated.
12. **Power-Cord Protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the equipment.
13. **Cleaning** – The equipment should be cleaned only as recommended by the manufacturer.
14. **Power Lines** – An outdoor antenna should be located away from power lines.
15. **Outdoor Antenna Grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electric Code, ANSI/NFPA No. 70–1981, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure 1 on page 4.
16. **Nonuse Periods** – The power cord of the equipment should be unplugged from the outlet when left unused for a long period of time.
17. **Object and Liquid Entry** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
18. **Damage Requiring Service** – The equipment should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the equipment; or
    C. The equipment has been exposed to rain; or
    D. The equipment does not appear to operate normally or exhibits a marked change in performance; or
    E. The equipment has been dropped, or the enclosure damaged.
19. **Servicing** – The user should not attempt to service the equipment beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

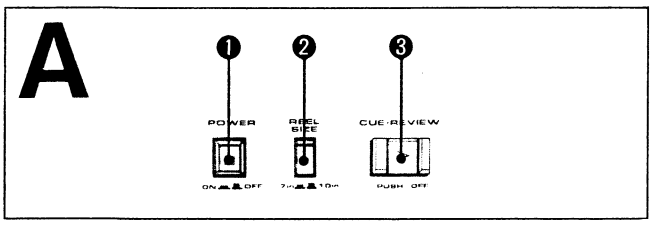
playback.
playback.
place as in

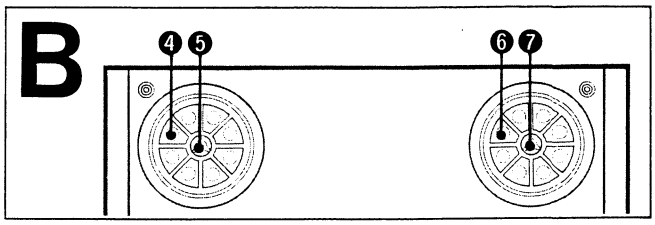
rse record-

t to travel
ɔe tension.
as the For-

2
CONTROLS

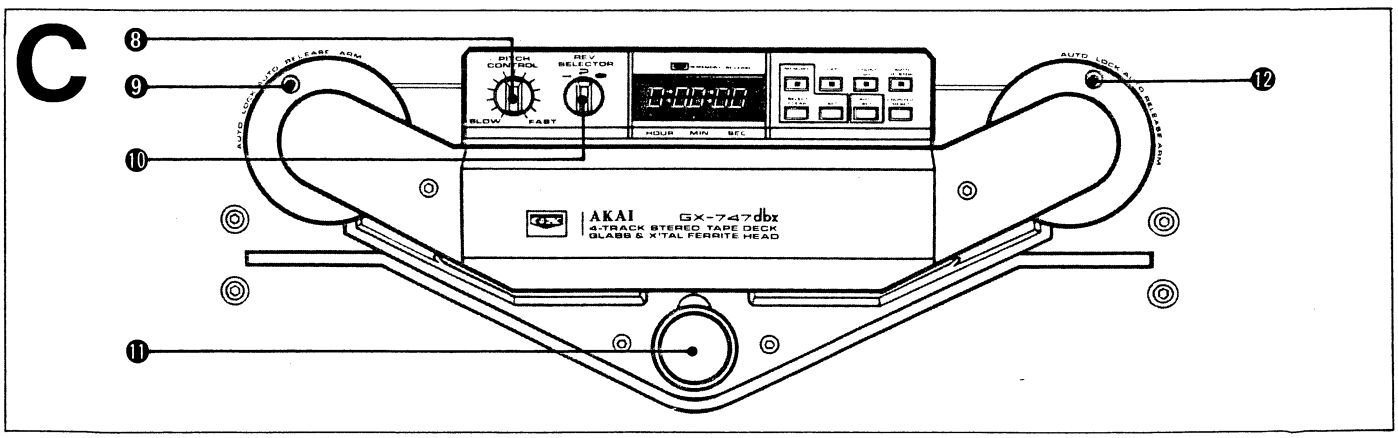

B
E
C
A
D
F
AKAI GX-747dbx
4-TRACK STEREDO TAPE DECK
GLASS & X'TAL FERRITE HEAD
AUTO MUTE
VU
VU
BIAS ADJUST
MIC
LINE
PHONES
OUTPUT
TIMER START
MONITOR
TAPE SPEED
TAPE SELECTOR
REC MODE
AKAI 4-TRACK STEREO TAPE DECK



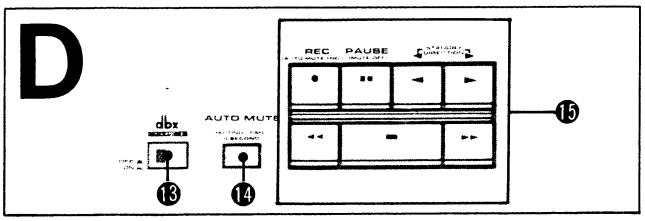


1. **POWER Switch**
   Depress to turn on the power.
   Depress again to turn off the power.
2. **REEL SIZE Selector**
   7 in: When using 7 in (17 cm) or 5 in (12 cm) reels.
   10 in: When using 10-1/2 in (26 cm) reels.
   * Set the selector only when the deck is in the stop mode.
   * Use reels of same size on both sides.
3. **CUE/REVIEW Lever (PUSH OFF)**
   Slide and lock the lever in the direction of arrow for cue or review operation.

4. **Supply Reel Table**
5. **Built-in Reel Retainer**
6. **Take-up Reel Table**
7. **Built-in Reel Retainer**



8. **PITCH CONTROL**
   For playback tape speed adjustment (range ±6% at 7-1/2 in/sec or 3-3/4 in/sec tape speed). Set to the center click position for tapes recorded with this deck and for normally recorded tapes. Also set to the center click position during recording.
9. **Left Tension Arm (Sensing Pin)**
   Prevents sudden pressure on the tape and allows it to travel smoothly by automatically maintaining the correct tape tension. If the tape is too loose or not in the correct position, the Auto Stop Mechanism will stop the tape. This Tension Arm also functions as the Reverse Sensing Pin. The Left and Right Tension Arms work together.
10. **Reverse (REV) SELECTOR**
    — : For one-way (forward or reverse) recording or playback.
    ⊃ : For one-cycle (forward to reverse) recording or playback.
    ⊂⊃ : For continuous playback. Recording will take place as in mode ⊃.
    * Automatic stop will be effected at the end of reverse recording.
11. **Pinch Roller**
    Presses against the capstan to transport the tape.
12. **Right Tension Arm (Sensing Pin)**
    Prevents sudden pressure on the tape and allows it to travel smoothly by automatically maintaining the correct tape tension. Works with the Auto Stop Mechanism and functions as the Forward Sensing Pin.



13. **dbx type I NR Switch**
Turn ON (▬) this switch to record or playback with dbx NR. The switch will light when the dbx NR is turned on.
Turn OFF (▮) this switch to record or playback without dbx NR.

14. **AUTO MUTE Button**
When this button is engaged during recording, the recording amp circuit will be brought into a no-signal mode. No recording will be made on the tape.

15. **Operating Buttons**
Recording [REC (►)] Button with Indicator
Depress this button and the PAUSE (◄) button simultaneously to put the deck into recording standby mode.
* The indicator will light during recording standby and recording modes.
PAUSE (▮▮) Button with Indicator
Depress this button to momentarily suspend tape travel.
* Does not function during fast forward and rewind modes.
* The indicator will light to confirm the pause mode.
Reverse (◄) Button with Indicator
Depress this button for reverse recording or playback.
* The indicator will remain lit during recording and playback modes and will flash on and off during pause, recording standby, stop, fast forward and rewind modes.
Forward (►) Button with Indicator
Depress this button for forward recording or playback.
* The indicator will remain lit during recording and playback modes and will flash on and off during pause, recording standby, stop, fast forward and rewind modes.
Rewind (◄◄) Button
Depress to rewind the tape in the direction of the arrows.
Stop (■) Button
Depress to stop tape travel and to cancel recording, playback, fast forward, rewind and pause modes.
Fast Forward (►►) Button
Depress to fast forward the tape in the direction of the arrows.
Note: To ensure stable operation of the timer start mechanism, please allow about 5 seconds to elapse after switching the power on and before pressing the operation buttons.

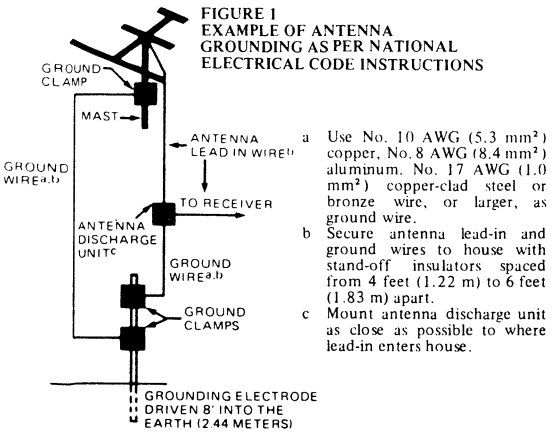
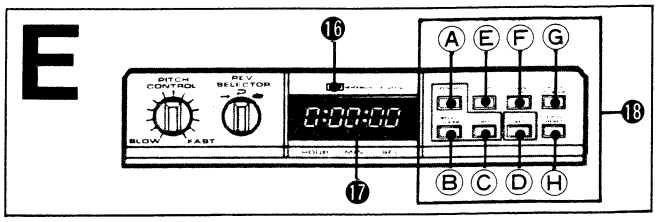


FIGURE 1
EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS

a Use No. 10 AWG (5.3 mm²) copper, No. 8 AWG (8.4 mm²) aluminum, No. 17 AWG (1.0 mm²) copper-clad steel or bronze wire, or larger, as ground wire.
b Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 feet (1.22 m) to 6 feet (1.83 m) apart.
c Mount antenna discharge unit as close as possible to where lead-in enters house.



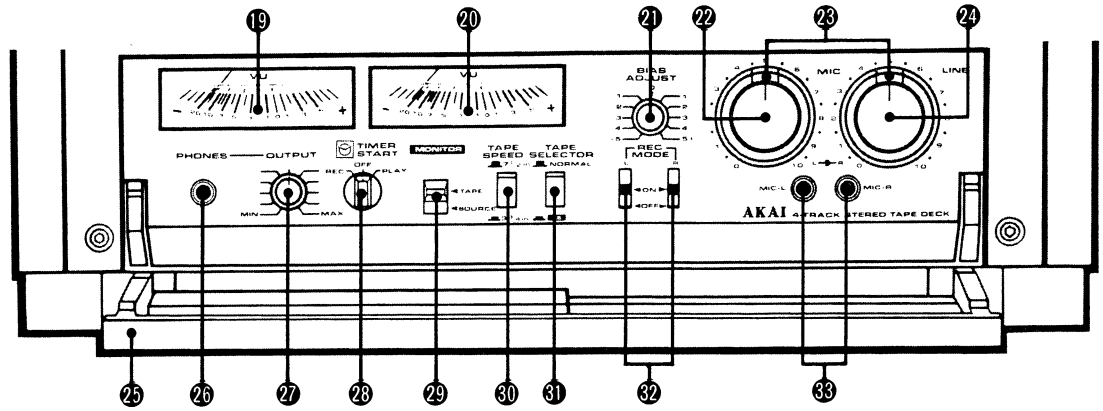
16. **MEMORY REVERSE Indicator**
Lights during memory auto reverse operation.

17. **Electronic Digital Counter (HOUR/MIN/SEC)**
Indicates the quantity of tape used in real time. Accurate time is not indicated if the TAPE SPEED selector is switched during operation. The Counter shows time from "0:00:00" to "5:59:59".

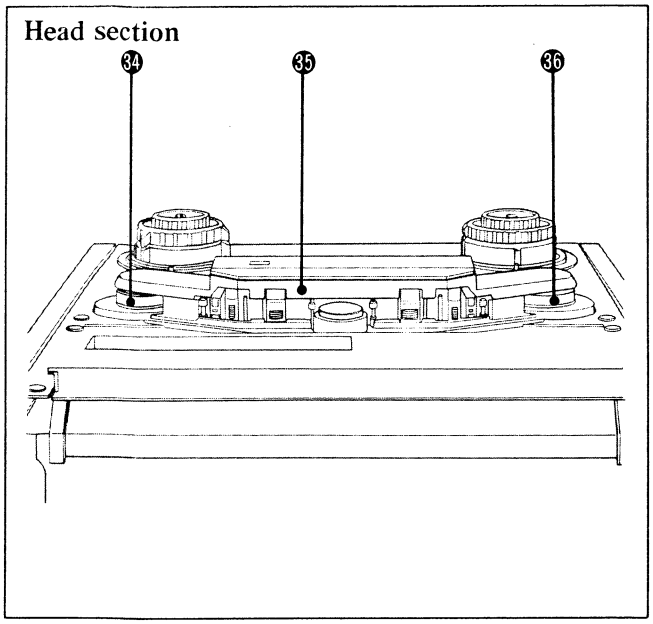
18. **Counter Auto System**
a. MEMORY button with indicator
Use this button for preset memory auto reverse. Depress this button and its indicator will light. The Electronic Digital Counter will be set to show memory indication and you can set the time at which auto reverse is to take place. This time is called "preset memory". Depress the button again and its indicator will go off. The Electronic Digital Counter will be set to time counter.
b. SELECT/CLEAR button
Use this button to set the preset memory. To cancel a previously set preset memory, depress the MEMORY button and then this button.
c. SET button
Depress this button to memorize the preset memory. When the preset memory is memorized, the MEMORY REVERSE indicator will light.
d. AUTO SET button
Depress this button and the tape travel direction will be reversed. The time at which this button was depressed will be memorized. We call this time "quick memory".
e. LAP button with indicator
Use this button to time the length of a selection. Depress the LAP button (its indicator will light) and the Electronic Digital Counter will be set to lap counter. Depress the button again (its indicator will go off) and the Electronic Digital Counter will be set to time counter.
* The LAP button will not function when the MEMORY REVERSE indicator is lit.
f. COUNT UP button with indicator
Depress this button (its indicator will light) and the Electronic Digital Counter indication will increase even when the tape travel direction is changed (forward → reverse → forward). Depress this button again (its indicator will go off) and the indication will increase or decrease according to the tape travel direction.
* The COUNT UP button will not function when the MEMORY REVERSE indicator is lit.
g. AUTO "0" STOP button with indicator
Depress this button and its indicator will light. When the tape is rewound or fast forwarded, the tape will stop when the Electronic Digital Counter indication is decreased to "0:00:00". Depress this button again (its indicator will go off) to cancel auto "0" stop.
* The AUTO "0" STOP button will not function when the MEMORY REVERSE indicator is lit.
h. COUNTER RESET button
Depress this button to reset the Electronic Digital Counter to "0:00:00".

For details on the counter auto system, please refer to page 20 to 29.

F



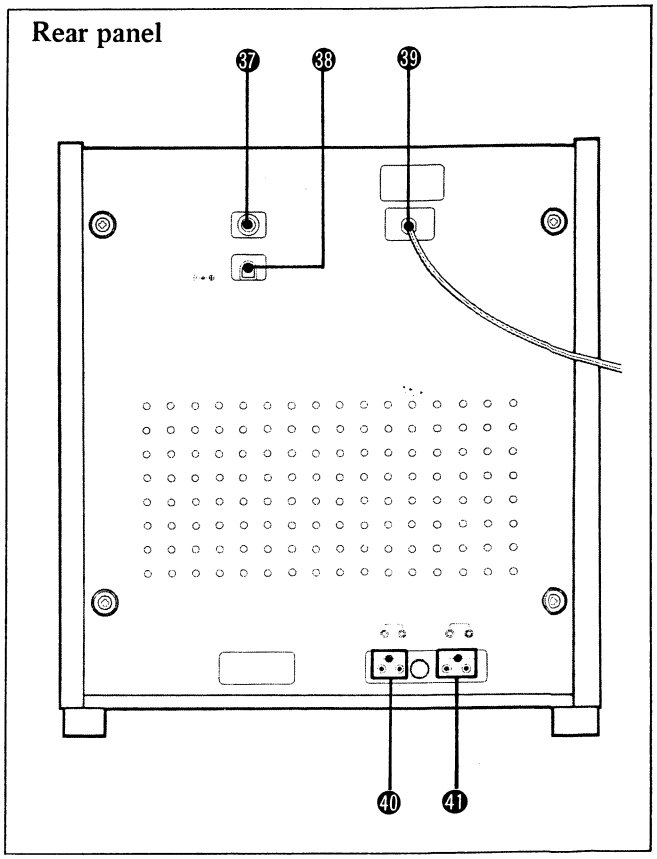
19. **Left Channel VU Meter**
Shows the recording or playback levels.
20. **Right Channel VU Meter**
Shows the recording or playback levels.
21. **BIAS Adjustment (ADJUST) Control**
Adjusts within ±30% the bias according to the type of tape used.
* Refer to BIAS ADJUSTMENT on page 11.
22. **MIC Recording Level Controls**
Use these controls to adjust the recording input levels for microphone inputs. The outer ring controls the right channel recording input levels and the inner knob controls the left channel recording input levels.
23. **Memory Markers**
Set these markers to the optimal recording level and adjust the recording level controls for effective fade-in/fade-out operation.
24. **LINE Recording Level Controls**
Use these controls to adjust the recording input levels for line inputs. The outer ring controls the right channel recording input levels and the inner knob controls the left channel recording input levels.
25. **Control Cover**
To open the cover, pull the top part down.
26. **Headphone (PHONES) Jack**
Accommodates 8 ohm impedance type stereo headphones.
27. **OUTPUT Control**
Adjusts line or headphone output levels. Set to correspond with the external amplifier input.
* Not interconnected with the VU Meters.
28. **TIMER START Selector**
REC: For absentee recording.
OFF: For all other times when Timer Start operation is not to be engaged.
PLAY: For timed playback.
29. **MONITOR Selector**
TAPE: To monitor the just recorded music or during playback.
SOURCE: To monitor the source music.
30. **TAPE SPEED Selector**
7-1/2 in: For 7-1/2 in/sec (19 cm/sec) tape speed.
3-3/4 in: For 3-3/4 in/sec (9.5 cm/sec) tape speed.
* Set only during stop mode.
31. **TAPE SELECTOR**
NORMAL: For low noise and wide range tapes.
EE: For Extra Efficiency tapes.
32. **"L" and "R" REC MODE Selectors**
"L" ON, "R" ON: For stereo recording
"L" ON, "R" OFF: For monaural recording on track 1 → 4.
"L" OFF, "R" ON: For monaural recording on track 3 → 2.
"L" OFF, "R" OFF: For playback.
33. **Microphone (MIC) Jacks (MIC-L: left, MIC-R: right)**
Plug in a microphone(s) for microphone recording.



34. Guide Roller
Maintains stable tape travel.

35. Head Cover
Contains the heads in the order of forward erase head, forward GX recording head, forward GX playback head, reverse erase head, reverse GX recording head, and reverse GX playback head.

36. Guide Roller
Maintains stable tape travel and works in conjunction with the Electronic Digital Counter.



37. REMOTE Jack
Connect the optional accessory Remote Control Unit RC-21 for remote control operation.

38. INPUT Jack
Connect the standard accessory AC Adaptor MP-515 for memory back-up power supply. Power will be supplied to the timer memory even when the power to the deck is turned off.
* Turn on the power before connecting the Adaptor.
* The deck may malfunction if the Adaptor is disconnected and connected too often.
* Only connect MP-515 to this jack.

39. Power Cord

40. LINE IN Jacks
Connect to the outputs of an external amplifier or tape deck or recorder.

41. LINE OUT Jacks
Connect to the inputs of an external amplifier or tape deck or recorder.

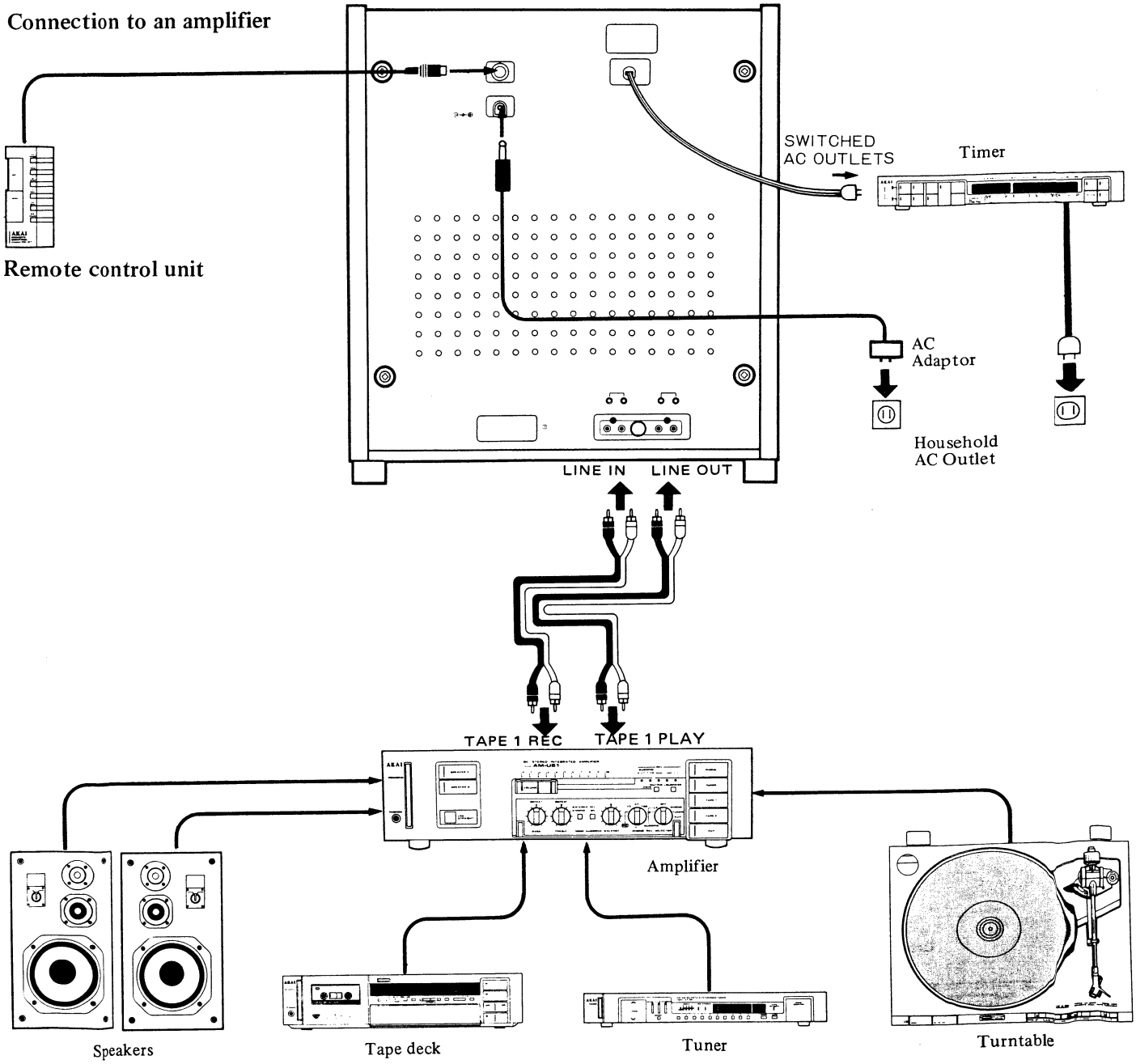
7 FEATURES

- The dbx type I NR widely expands the dynamic range of tape.
- Long time recording/playback with 10 in (26 cm) tapes.
- Auto reverse recording/playback, auto stop, and much more with the auto counter system which uses a micro-computer.
- Electronic digital counter which shows tape travel in real time can also show lap time and the preset auto reverse times.
- Accurate auto system operations without damaging the tape due to micro-computer controlled tape stop.
- Combination of sensing tapes and the reverse selector allows continuous playback, one-way (forward or reverse) recording/playback and one-cycle (forward to reverse) recording/playback.
- Tape monitoring is possible in reverse or forward direction due to the 6-head system.
- GX heads for excellent recording/playback results.
- Direct drive center capstan system with AC servo motor equipped with C.P.G.
- Feather-touch, direct function change due to micro-computer controlled system control.
- Easy and accurate tape loading due to tension arms with auto lock/auto release mechanism.
- Cue and review functions to quickly find the beginning of a selection.
- Recording mode switches to prevent accidental recording over of prerecorded tapes.
- Large VU meters for accurately setting the recording input levels.
- Tape selector with EE position for Extra Efficiency (EE) position tapes.
- Recording bias control to bring out the full performance of tape.
- Recording input controls with memory markers for fade-in/fade-out operation and microphone mixing.
- Output control for adjusting the volume levels for headphone listening.
- Absentee recording and timed playback with an optional audio timer.
- Remote control operation possible.

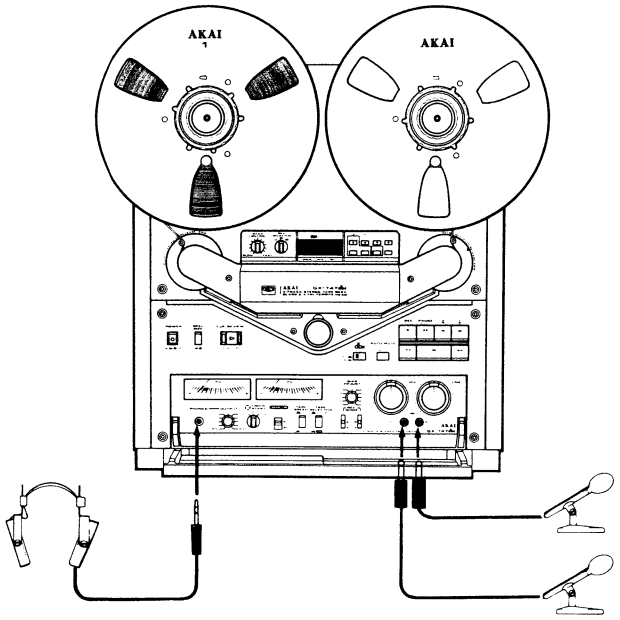
CONNECTIONS

- Switch off all the components before connecting.
- Insert the connection plugs firmly into the connection jacks.
- Please keep plugs and jacks clean. Dirt causes noise and distortion.
- When using a timer, connect this deck's power cord into either the amplifier's AC outlet or directly to the timer's switched outlet.
- Connect the AC Adaptor MP-515's power cord to a household AC outlet.
  * Disconnect the power cord if you are not going to use it for a long time.
- Connect the AC Adaptor MP-515 only when the deck is turned on.

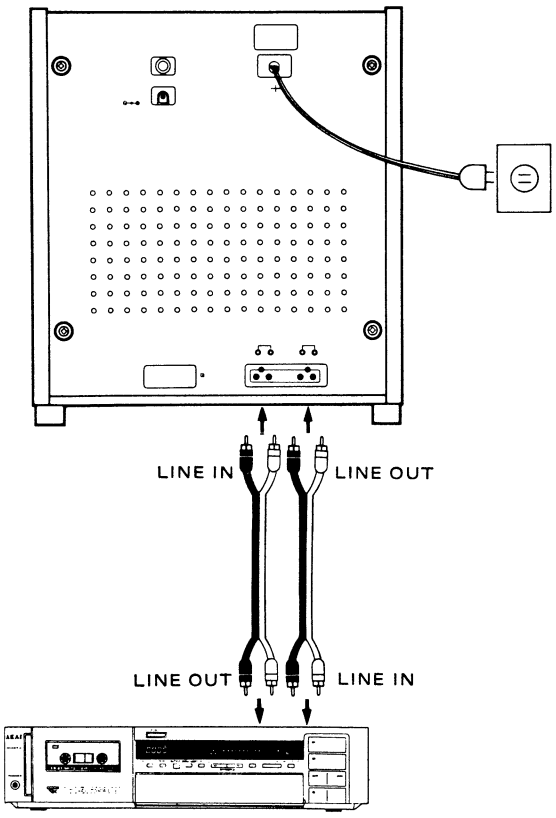
Connection to an amplifier



Front panel connections

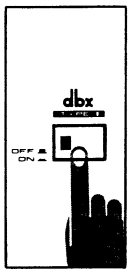


Connection to another tape deck



dbx type I NR SYSTEM

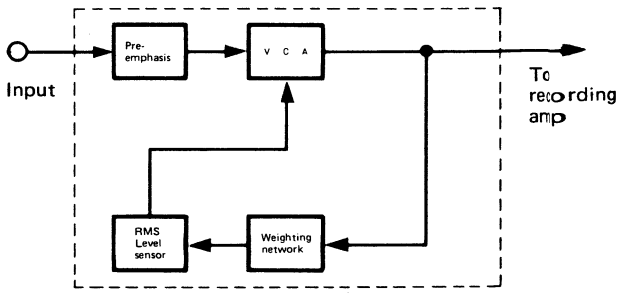
The Akai GX-747 dbx is equipped with dbx type I noise reduction system (NR) to improve the dynamic range of the tape.
The dbx type I NR system has a compression/expansion ratio of 2. During recording, the signals are compressed by 1/2 and at playback they are expanded by the same amount as during compression (i.e. ratio of 2) and returned to their original state. The compression of the signals results in extended saturation level of the tape (by approximately 10 dB) and the expansion of the signals results in reduction in tape noise (by 30 to 40 dB) across the entire audible range. Therefore, by using the dbx NR system, dynamic range of more than 123 dB (1 kHz) can be realized. When used in combination with the EE position tapes, you can realize the full dynamic range of the source music.
The dbx NR system used in the GX-747 dbx is of type I which is for professional use. The level sensor's frequency response is wider in the type I dbx NR system than those in the type II dbx NR (for consumer use). Therefore, the tape's saturation level is improved more in the type I.



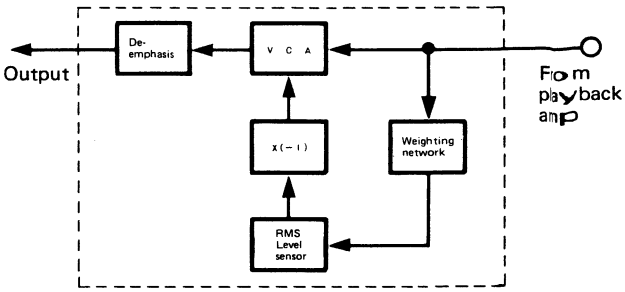
How to use

Set the dbx NR switch before recording or playing back a tape. In order to make the full use of the dbx NR system, make sure that you set the dbx NR system correctly during playback.

dbx encoder



dbx decoder

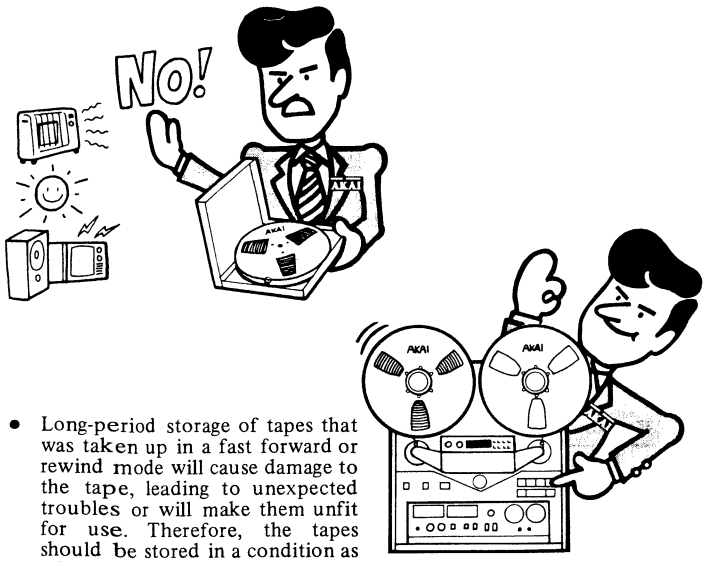


TAPES

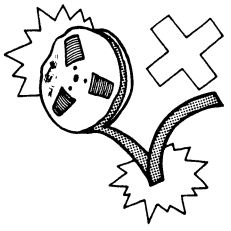
Tape Care

- Fingering the magnetic surface of the tape causes signal dropout. Particular care should be taken with open reel tapes.

- Recordings cannot be made on the leader tape at the beginning and end of the tape. Forward the tape until there is no leader tape in the head path before recording.
- Please do not leave tapes loaded on the deck over long periods of time. Remove after use, replace in their boxes and store in a cool, dry place away from units producing magnetic fields such as speakers or TVs.



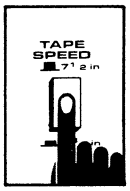
- Long-period storage of tapes that was taken up in a fast forward or rewind mode will cause damage to the tape, leading to unexpected troubles or will make them unfit for use. Therefore, the tapes should be stored in a condition as taken up in an orderly manner with the tape traveling at the fixed speed of recording or playback. However, either rewind or fast forward the entire tape before using the tape after storage.



- Do not bend or force the tapes. Faulty reels can cause unstable tape travel so avoid loose or warped reels.

Tape recording time

(1,100 m), 2,400 ft. (740 m), 1,800 ft. (650 m) and 1,200 ft. (370 m). Since this deck offers two choices of tape speed, 7-1/2 ips (19 cm/sec) and 3-3/4 ips (9.5 cm/sec), please refer to the following list for the recording time.



* **Faster the tape speed, better the wow and flutter and frequency characteristics. However, recording and playback time will be shorter.**

4-track 2 channel stereo recording (playback) system

Tape Speed \ Tape Length		3,600 ft (1,100 m)	2,400 ft (740 m)	1,800 ft (550 m)
7-1/2 in (19 cm/sec)	One-way	90 min.	60 min.	45 min.
	Two-way	180 min.	120 min.	90 min.
3-3/4 in (9.5 cm/sec)	One-way	180 min.	120 min.	90 min.
	Two-way	360 min.	240 min.	180 min.

4-track monaural recording (playback) system

Tape Speed \ Tape Length		3,600 ft) (1,100 m)	2,400 ft (740 m)	1,800 ft (550 m)
7-1/2 in (19 cm/sec)	One-way	90 min.	60 min.	45 min.
	Two-way	180 min.	120 min.	90 min.
	Two-way + one-way	270 min.	180 min.	135 min.
	Double two-way	360 min.	240 min.	180 min.
3-3/4 in (9.5 cm/sec)	One-way	180 min.	120 min.	90 min.
	Two-way	360 min.	240 min.	180 min.
	Two-way + one-way	540 min.	360 min.	270 min.
	Double two-way	720 min.	480 min.	360 min.

Standard reference and recommended tapes

- The equalizer circuit adjusts according to the magnetic characteristics of the tape in use and it is therefore important to set the TAPE SELECTOR to the correct position.
  This deck can be set for EE tapes. When using EE tapes, set the TAPE SELECTOR to the EE position and during recording set the BIAS ADJUST control to "0".

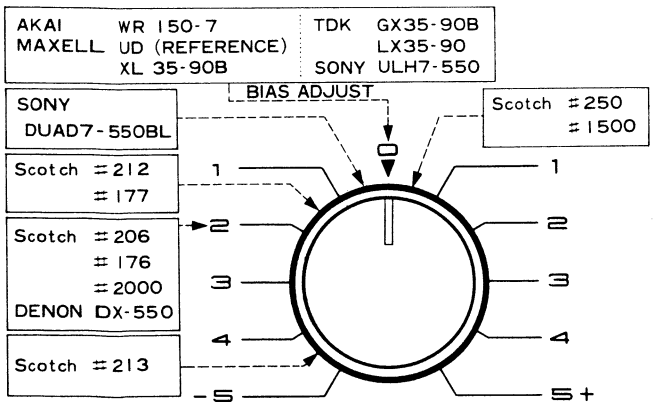
EE
EXTRA EFFICIENCY

TAPE SELECTOR / BRAND	NORMAL	EE
AKAI	LN, WR	
SCOTCH	# 176, # 177, # 206, # 207, # 211, # 212, # 213, # 218, # 250, # 1500, # 2000, CL	
SONY	ULH, DUAD, PR-150, SLH, SLH-BL, FeCr	
TDK	GX, LX, T, AUDUAL, AUDUA, LB	SA*
MAXELL	LN, UD*, XL, UDXL	XL II*
BASF	LH, LN, LHS	
DENON	DX	
FUJI	FM, FG, FB	

* 150% type (550 m) tapes with this mark are the standard reference tapes.
Each tape position is set according to the standard reference tape.

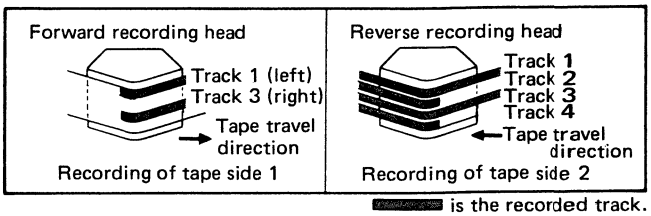
Bias adjustment

- This deck is equipped with a BIAS Adjustment (ADJUST) control which can adjust the bias by ±30% at each tape position.
- When recording with standard reference tapes, set to "0".
- When recording with tapes not included in the list, set to "0".
- When recording with EE tapes, set to "0".
- When set to the most extreme right or left position, changes in frequency characteristics will occur.



1 4-track stereo recording and playback system

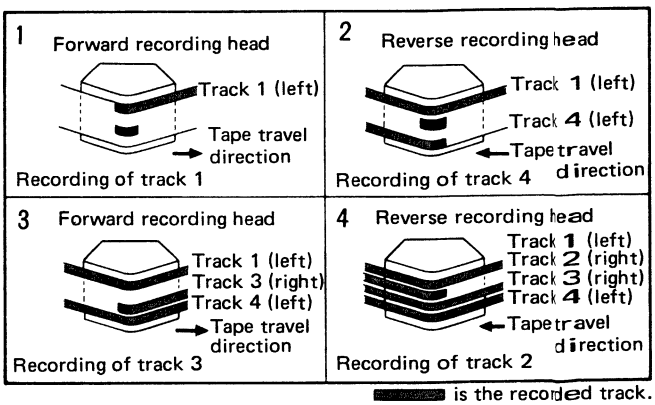
Stereo recording/playback requires the simultaneous use of two tracks. For stereo recording/playback, set the "L" and "R" REC MODE selectors to ON during recording and to OFF during playback. The first recording/playback takes place on tracks 1 and 3, and the second on tracks 2 and 4 after the Reverse (◄) button has been engaged.



■ is the recorded track.

2 4-track monaural recording and playback system

4-track monaural recording sequence is 1 → 4 → 3 → 2. For monaural recording, set the "L" REC MODE selector to ON and the "R" REC MODE selector to OFF. The first recording/ playback takes place on track 1 and second on track 4 after the Reverse (◄) button has been engaged. For recording on tracks 3 and 2, set the "L" REC MODE selector to OFF and the "R" REC MODE selector to ON. The third recording takes place on track 3, and the fourth on track 2 after the Reverse button (◄) has been engaged. For monaural playback, set the "L" and "R" REC MODE selectors to OFF.



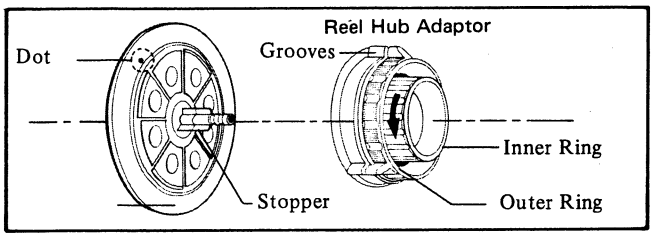
■ is the recorded track.

GX Head

When compared with other heads the GX heads in this deck are highly efficient with their decreased magnetic change loss and subsequent corresponding decrease in the amount of compensation to the equalizer circuit. This decrease in compensation can thus be actively used to improve the tape's magnetic characteristics. In particular the compensation for high frequency characteristics improves the high frequency high level recording. Moreover although the noise inherent in the tape and the built-in amplifier is increased by the equalizer circuit, the amount of decreased compensation decreases the noise contributing to an improved signal to noise ratio.

TAPE LOADING

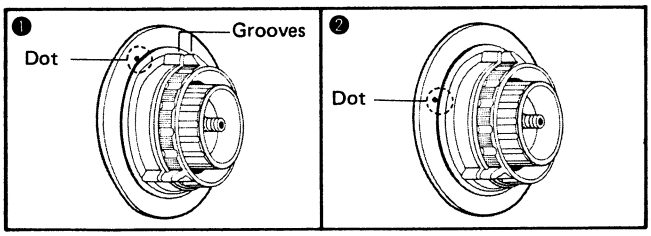
How to attach the reels



Attaching 10-1/2 in (26 cm) reels

Turn the Inner Ring of the Reel Hub Adaptor counterclockwise and insert the stopper. The next procedure differ according to the type of reels used.

* When using 7 in (17 cm) or 5 in (12 cm) reels, place a full reel on the Supply Reel Table and lock it into place by pulling the tip of the Stopper outward and turning it to the left or right. Attach an empty reel to the Take-up Reel Table in the same way.



❶ Plastic reels

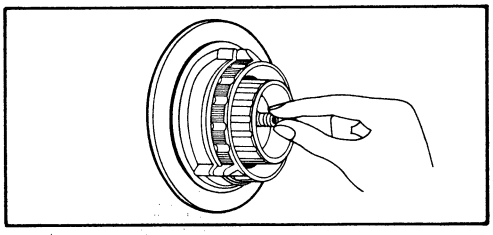
Align the grooves on the Reel Hub Adaptor with the dot on the Reel Table.

❷ Metalic reels

Align the grooves, but do not align them with the dot.

The following procedure is the same for both types of reels.

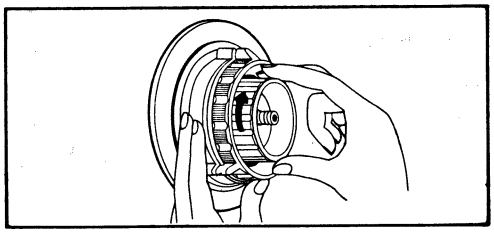
1



Place a Reel Hub Adaptor on the Supply Reel Table.

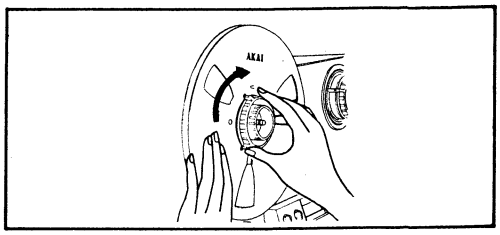
Pull out the Stopper and turn it to the left or right.

2



Turn the Inner Ring clockwise to lock the Reel Hub Adaptor to the Supply Reel Table.
Attach the other Reel Hub Adaptor to the Takeup Reel Table in the same manner.

3

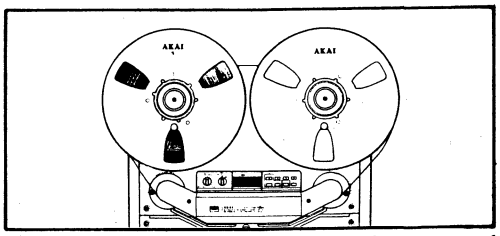


Place a full reel on the Supply Reel Table and turn the Outer Ring clockwise to lock the reel. Attach an empty reel on the Take-up Reel Table in the same manner.

Tape loading

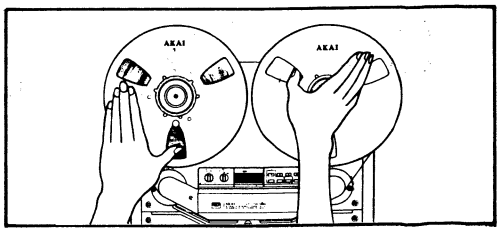
(It is difficult to load a tape when the power is turned off. Therefore, always turn on the power. When the power is turned on, the Tension Arms will move outwards.)

1



Unwind about 2 to 2-1/2 ft of tape and thread it into the empty reel as shown above.
Insert the end of the tape into the slot in the empty reel.

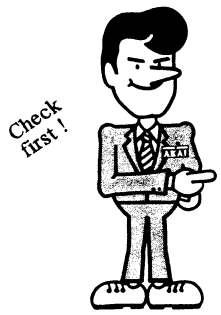
2

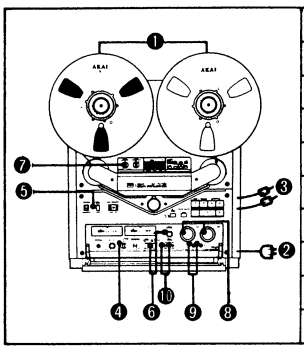


Gently hold the tape in position with the thumb and turn the empty reel counterclockwise until all the tape slack has been taken up.

- If there is little tape slack, when the tape starts traveling, the motor inside the Tension Arms will automatically take up the slack so that the tape will travel at the ideal tension.
- The Tension Arms prevent sudden pressure on the tape and allow it to travel smoothly by automatically maintaining the correct tape tension. If the tape is too loose or not in the correct position, the Tension Arms in conjunction with the Auto Stop Mechanism will stop the tape. In such a case, rethread the tape or take up the slack.

STEREO RECORDING

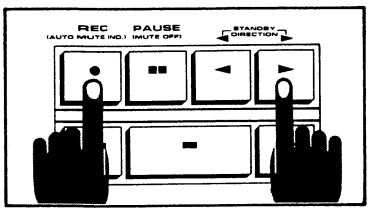


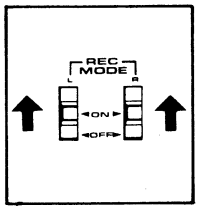


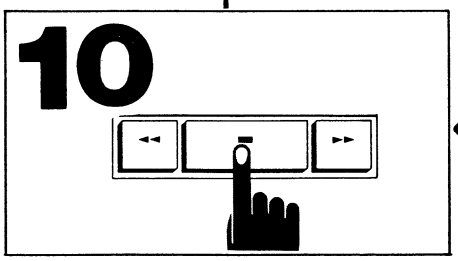
The tape is loaded properly.
The Power Cord is connected properly.
All the components are connected properly.
The TIMER START selector is set to OFF.
The REEL SIZE selector is set properly.
The TAPE SELECTOR and the BIAS ADJUST control are set to the type of tape loaded.
The OUTPUT control is set to more than 3.
If using microphones, connect them to the MIC jacks.
Both the "L" and "R" REC MODE selectors are set to ON.
The PITCH CONTROL is set to the center click position.

Added on recording

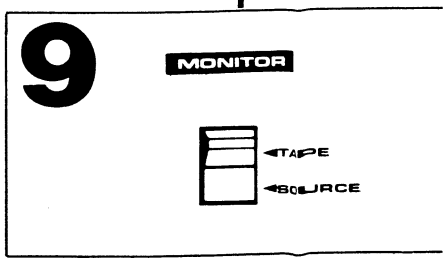
During playback, depress the Forward (►) or Reverse (◄) button along with the REC (●) button and you can begin recording without stopping the tape. Don't forget to set the "L" and "R" REC MODE selectors to ON.



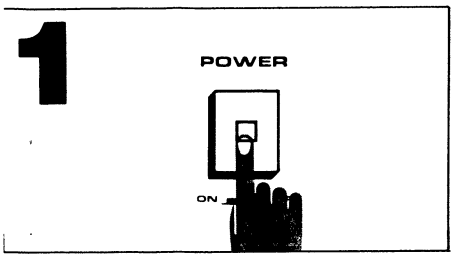




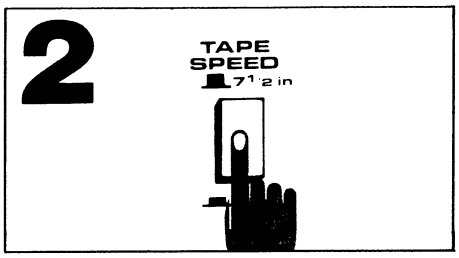
To stop recording, depress the Stop (■) button.



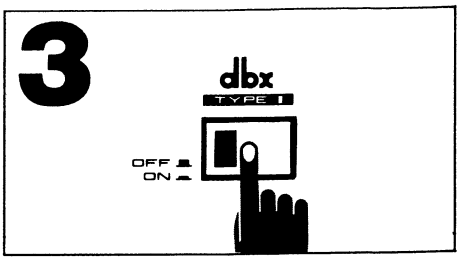
Set the MONITOR selector to TAPE to monitor the just recorded music and confirm whether the recording input levels are set correctly



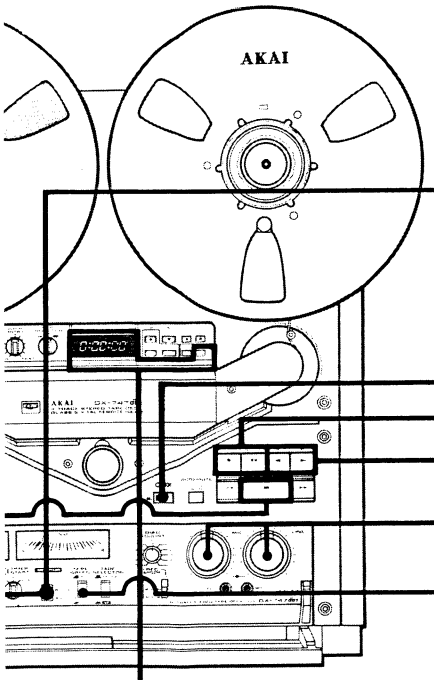
Depress the POWER switch to turn on the deck.

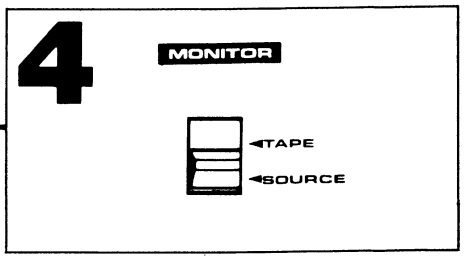


Set the TAPE SPEED selector to the desired speed.

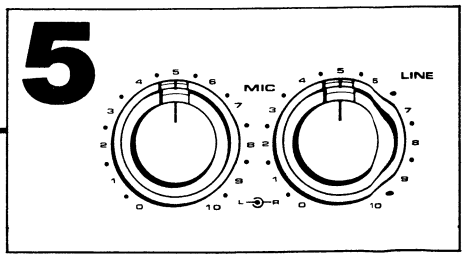


Set the dbx TYPE I NR switch:
ON (▬): When recording with dbx type I NR.
OFF (▮): When recording without dbx type I NR.

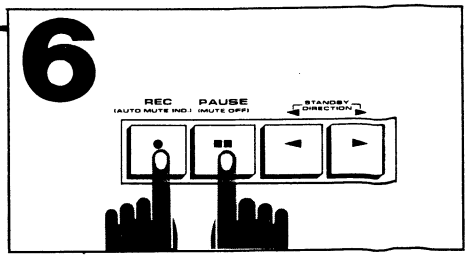




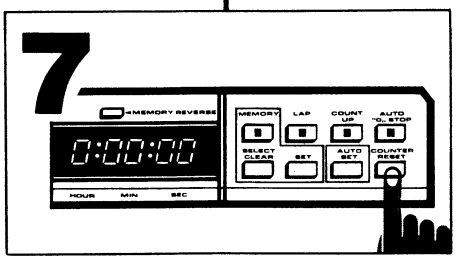
Set the MONITOR selector to SOURCE to monitor the source music.



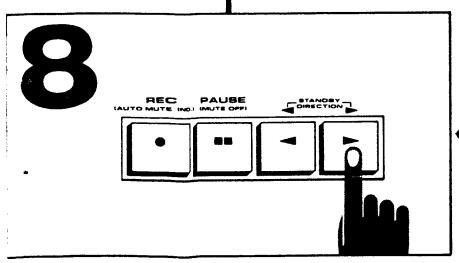
Adjust the recording input levels with the MIC or LINE recording level controls.



Depress the REC (●) and PAUSE (❙■) buttons simultaneously to go into recording standby.

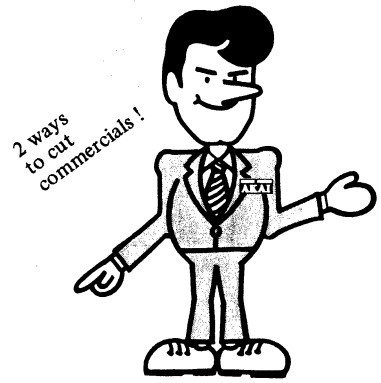


Depress the COUNTER RESET button and reset the Electronic Digital Counter to "0:00:00". Refer to page 20 to 29 on COUNTER AUTO SYSTEM.



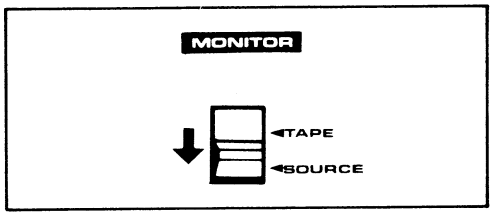
Depress the Forward (►) button to start recording.

TO LEAVE OUT COMMERCIALS DURING OFF-THE-AIR RECORDING



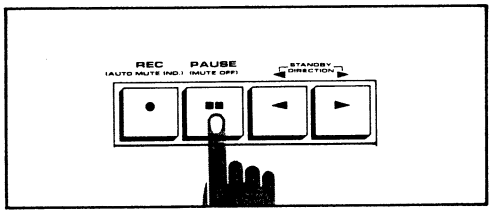
Using the PAUSE (▮▮) button

1



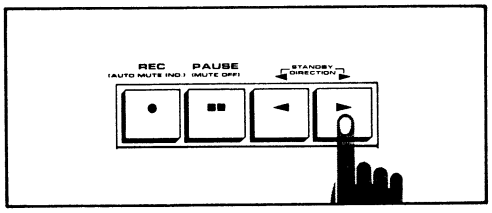
Set the MONITOR selector to SOURCE a little before the commercial starts to monitor the source music.

2



Depress the PAUSE (▮▮) button just before the commercial starts to temporarily stop recording.

3



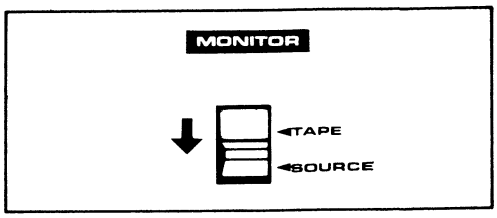
At the end of the commercial, depress the Forward (►) button to resume recording.

- The same method can be used to leave out the sound of the stylus dropping onto the record, etc.

Using the AUTO MUTE button

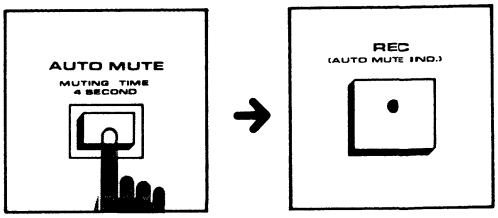
Use the AUTO MUTE button to create 4 seconds of blank spaces between selections.

1



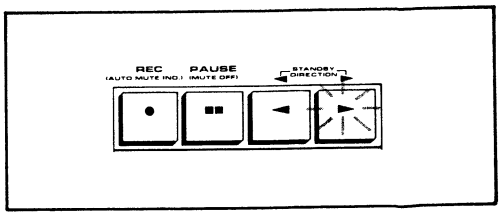
Set the MONITOR selector to SOURCE a little before the commercial starts to monitor the source music.

2



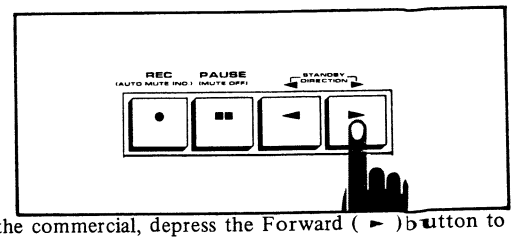
Depress the AUTO MUTE button just before the commercial starts. No recording will be made for 4 seconds. The REC (●) button will flash on and off.

3



At the end of 4 seconds, the deck will go into recording standby.

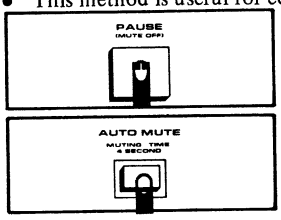
4



At the end of the commercial, depress the Forward (►) button to resume recording.

* Don't forget to set the MONITOR selector to TAPE during recording.

- This method is useful for editting during tape dubbing, etc.

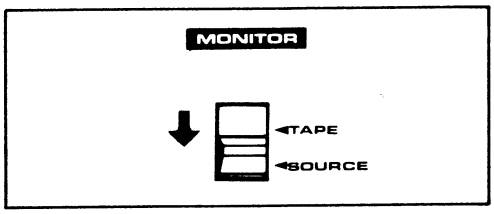


- To create blank spaces of less than 4 seconds, depress the PAUSE (▮▮) button to cancel the auto mute system.
- To create blank spaces of more than 4 seconds, keep depressing the AUTO MUTE button for as long as you wish.

HOW TO SET THE CORRECT RECORDING INPUT LEVELS

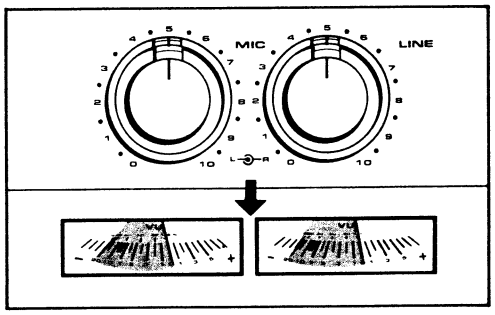
To enjoy good playback, you must set the recording input levels correctly. The recording input levels should be set as high as possible. However, if the levels are too high, distortion will be added and if they are too low, tape noise such as tape hiss will be added.

1



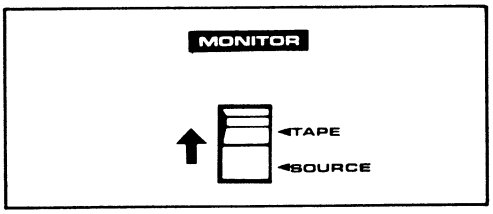
Set the MONITOR selector to SOURCE to monitor the source music.

2



While observing the VU meters, adjust the MIC or LINE recording level controls.

3



During recording, set the MONITOR selector to TAPE to monitor the just recorded music. At this time, the indications on the VU Meters are the input levels of the signals being recorded.

- The best way to judge whether the recording input levels are set properly is to connect a pair of headphones and compare the just recorded signals to the source signals by switching the MONITOR selector. The GX heads of this deok delivers excellent recording and playback results and when used with high performance tapes, the recording input levels can sometimes go over the 0 dB without resulting in distortion.
- Monitor the recording with a pair of headphones and set the recording input levels to the level just before distortion becomes noticeable and you will get greater dynamic range and better S/N ratio.

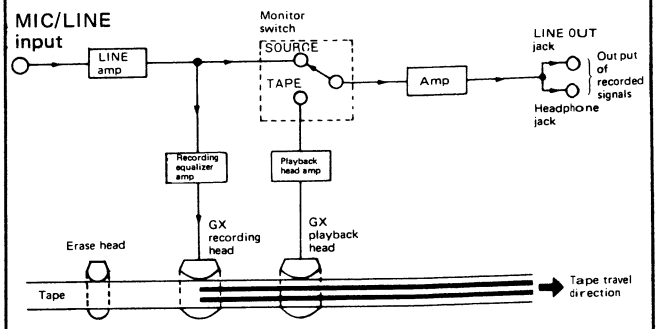
Tape monitoring

The best way to judge whether you have set the recording input levels correctly is to compare the just recorded music to the source music. For this purpose, this deck is equipped with a tape monitor.

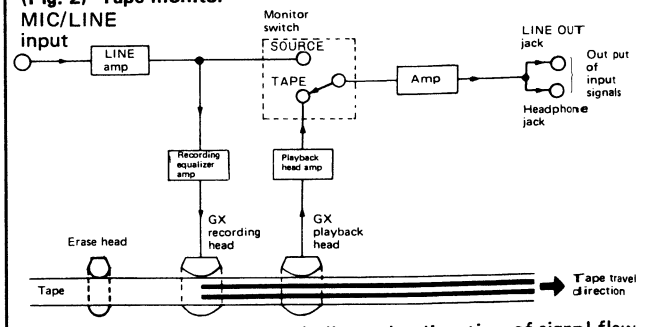
- Set the MONITOR selector to SOURCE to monitor the source music.
- Set the MONITOR selector to TAPE to monitor the just recorded music.

Block diagram of the tape monitor (GX-747)

(Fig. 1) Source monitor

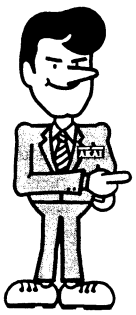


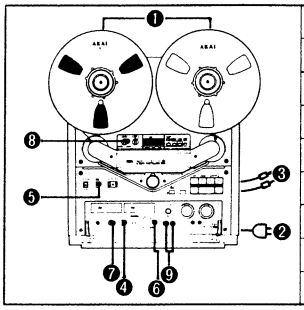
(Fig. 2) Tape monitor



* The arrows indicate the direction of signal flow.
* The tape is traveling in the forward direction.

STEREO PLAYBACK



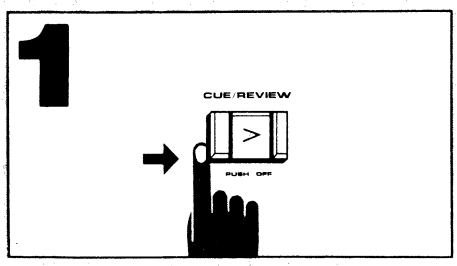


The tape is loaded properly.
The Power Cord is connected properly.
All the components are connected properly.
The TIMER START selector is set to OFF.
The REEL SIZE selector is set properly.
The TAPE SELECTOR is set to the type of tape loaded.
The OUTPUT control is set to more than 3.
The PITCH CONTROL is set to the center click position.
The "L" and "R" REC MODE selectors are set to OFF.

To find the beginning of a selection

You can rewind or fast forward the tape while listening to the tape.

1



Slide and lock the CUE/REVIEW lever in the direction of the arrow (>). Depress the Rewind (◄◄) or Fast Forward (►►) button.

2

When you come to the selection you want to hear, depress the Stop (■) button.

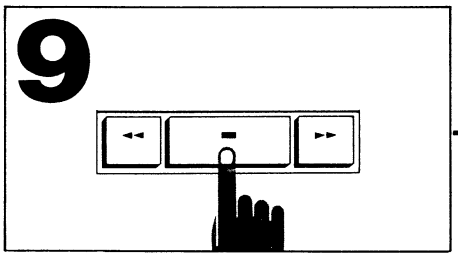
3

Release the CUE/REVIEW lever.

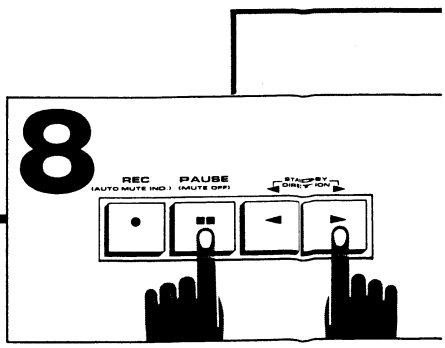
4

Depress the lit Forward (►) or Reverse (◄) button to start playback.

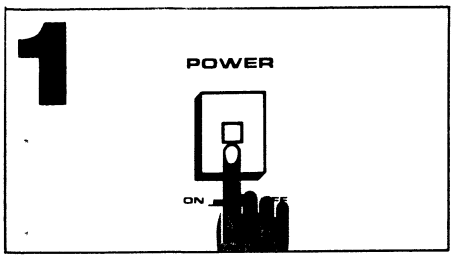
* You can also find the beginning of a selection by using the AUTO COUNTER SYSTEM. Refer to pages 27 and 28.



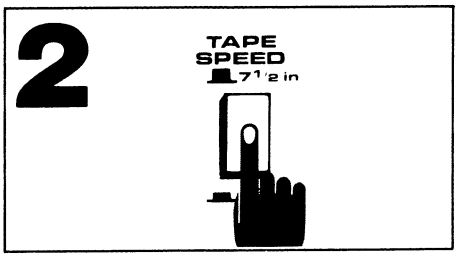
To stop playback, depress the Stop (■) button.



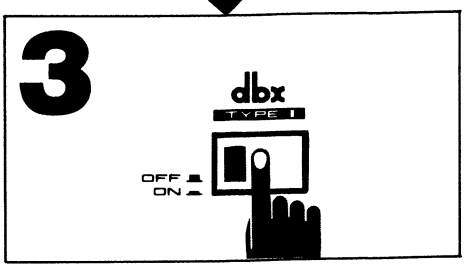
To temporarily stop playback, depress the PAUSE (▮▮) button. To resume playback depress the Forward (►) button.



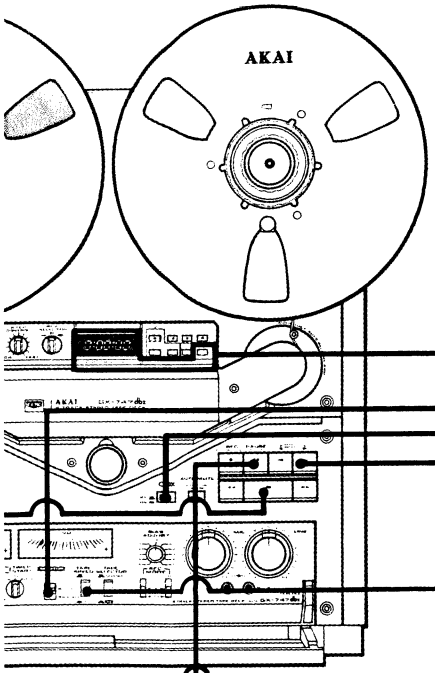
Depress the POWER switch to turn on the deck.

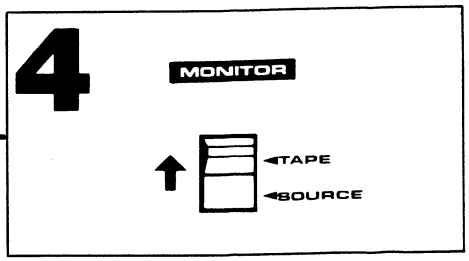


Set the TAPE SPEED selector to the speed at which the tape was recorded.

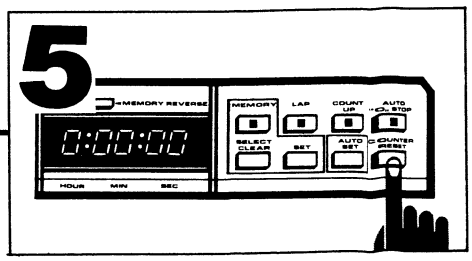


Set the dbx TYPE I NR switch:
ON (▬): When playing back a tape recorded with dbx type I NR.
OFF (■): When playing back a tape recorded without dbx type I NR.

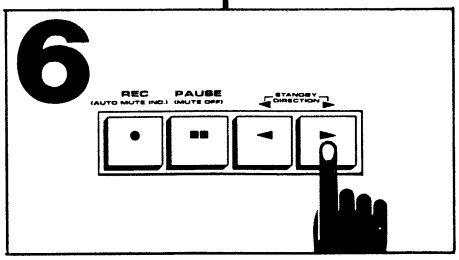




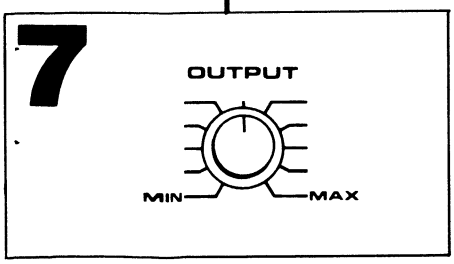
Set the MONITOR selector to TAPE.



Depress the COUNTER RESET button and reset the Electronic Digital Counter to "0:00:00". Refer to page 20 to 29 on COUNTER AUTO SYSTEM.



Depress the Forward (►) button to start playback.



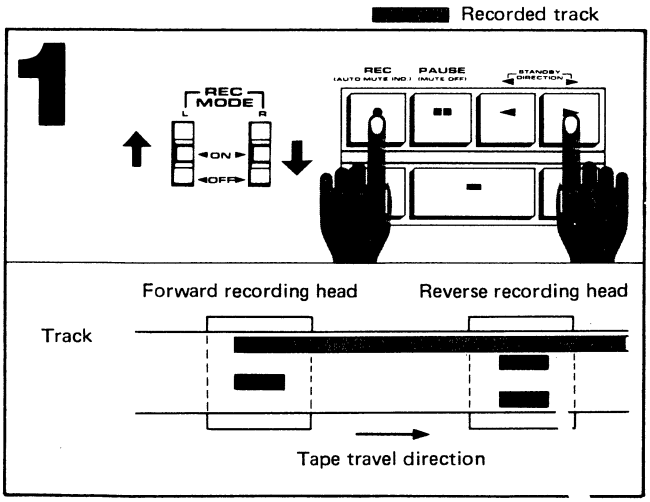
Use the OUTPUT control to adjust the headphone or amplifier output.

Monaural recording

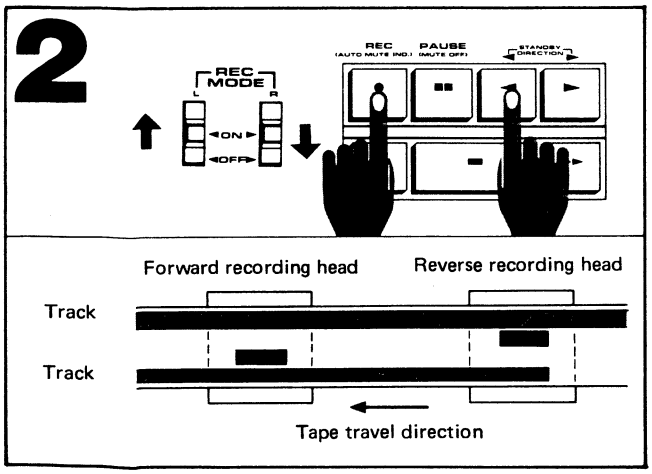
4-track monaural recording sequence is 1 → 4 → 3 → 2. For the left channel, track 1 and then track 4 are recorded and for the right channel, track 3 and then track 2 are recorded.

Procedure

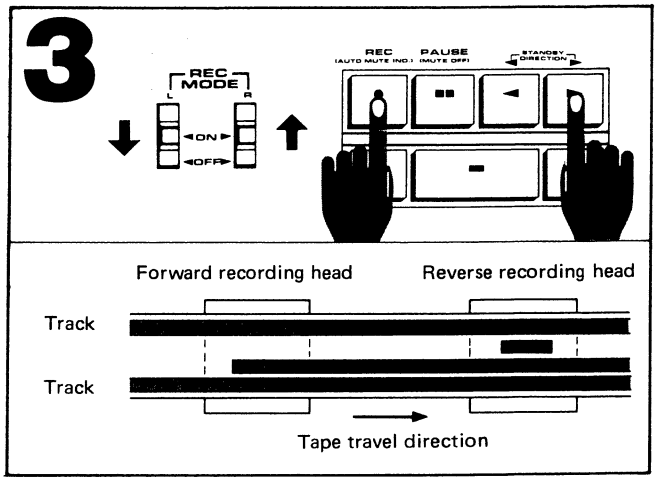
First refer to "Stereo recording" on pages 13 and 14.



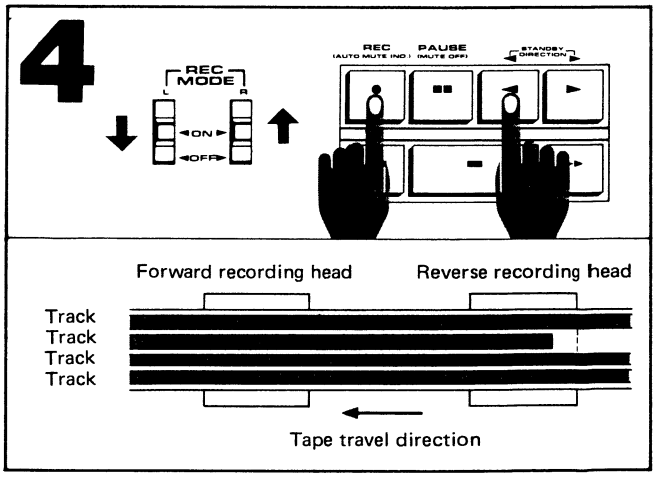
Instead of setting both the "L" and "R" REC MODE selectors to ON, set the "L" REC MODE selector ON and the "R" REC MODE selector to OFF.
Depress the REC (●) and Forward (►) buttons simultaneously to start recording.



After you have finished recording on track 1, depress the REC (●) and Reverse (◄) buttons simultaneously to start recording on track 4.

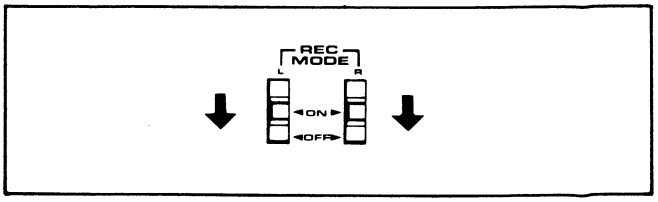


Set the "L" REC MODE selector to OFF and the "R" REC MODE selector to ON.
Depress the REC (●) and Forward (►) buttons simultaneously to start recording on track 3.



After you have finished recording on track 3, depress the REC (●) and Reverse (◄) buttons simultaneously to start recording on track 2.

Monaural playback

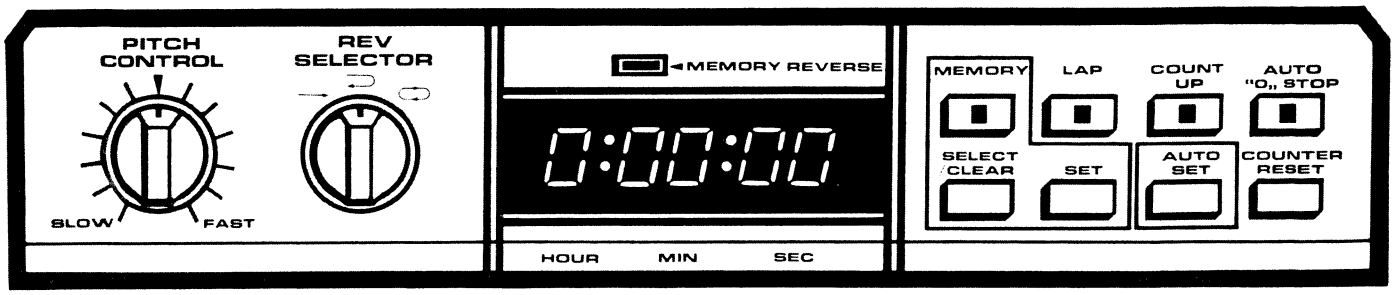


First refer to "Stereo playback" on pages 17 and 18.
Set both the "L" and "R" REC MODE selectors to OFF.
As this deck can playback only in stereo, monaural playback is not possible. Therefore, for monaural playback, adjust the amplifier's mode selector or balance control so that only one channel (left or right) is played back.

COUNTER AUTO SYSTEM

The Electronic Digital Counter is a real time counter which shows tape travel in hours, minutes and seconds. 5 different types of auto system are possible using this counter.

* If a tape has sensing tapes, the tape travel direction will be automatically reversed when a Tension Arm comes in contact with a sensing tape.



1 **Preset memory auto reverse**

When the REV SELECTOR is set to continuous (⊂⊃), you can repeatedly change the tape travel direction at two points: the preset time counter reading of your choice (preset memory) and the time counter reading of "0:00:00".

2 **Quick memory auto reverse**

When the REV SELECTOR is set to continuous (⊂⊃), you can repeatedly change the tape travel direction at two points: when you depressed the AUTO SET button (quick memory) and the time counter reading of "0:00:00".

* However, preset memory takes priority over quick memory.

3 **Lap counter**

By setting the lap counter to "0:00:00", you can time the length of a recording or playback.

4 **Count-up**

Depress the COUNT UP button and you can time the length of a recording or playback whether the tape is travelling in the forward or reverse direction.

5 **Auto "0" stop**

The tape will be stopped at the time counter or lap counter reading of "0:00:00".

HOW TO USE THE COUNTER AUTO SYSTEM

Preset memory auto reverse

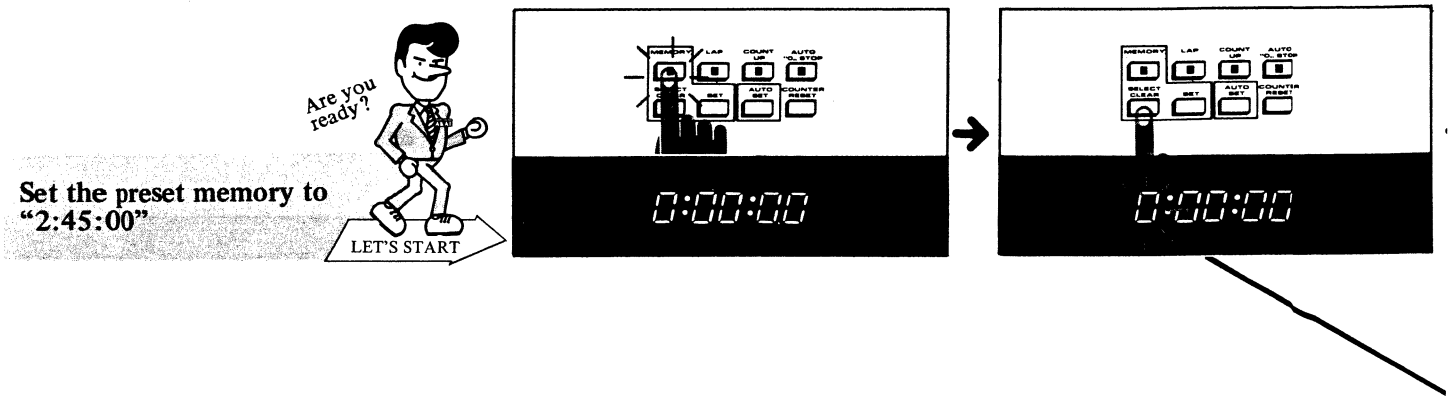
* If a tape has sensing tapes, the tape travel direction will be automatically reversed when a Tension Arm comes in contact with a sensing tape.

1

Depress the MEMORY button. Its indicator will light. The Electronic Digital Counter will be set to memory indicator.
If nothing has been memorized, "0:00" will be displayed.

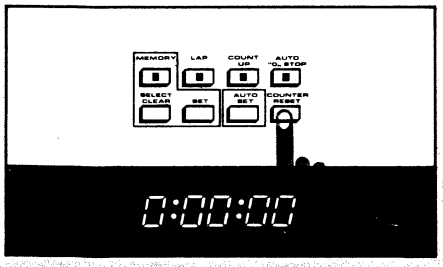
2 Set the hours

Depress the SELECT/CLEAR button. "0:00:-00" will be displayed and the hour indicator will flash on and off. Keep depressing the SELECT/CLEAR button or repeatedly depress the button and set the hour indicator to "2". The maximum hour indication is "5".



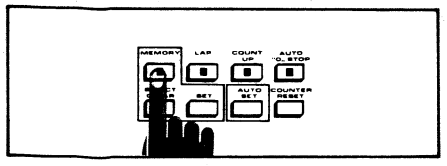
• To reset the preset memory

During the setting of the preset memory, when you want to reset any of the indicators, depress the COUNTER RESET button and repeat from step 2.



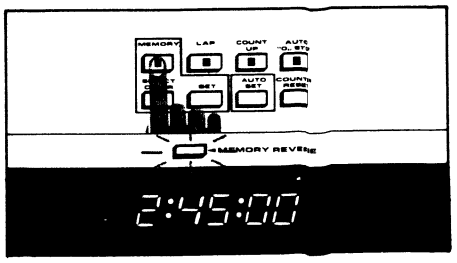
• To cancel the preset memory

During the setting of the preset memory, when you want to cancel it, depress the MEMORY button. The Electronic Digital Counter will be reset to time counter.



10

The time you have just set is called "preset memory".
After you have memorized the preset memory, depress the MEMORY button. Its indicator will go off and Electronic Digital Counter will be reset to time counter.
Depress the MEMORY button again and you can confirm the preset memory.



3

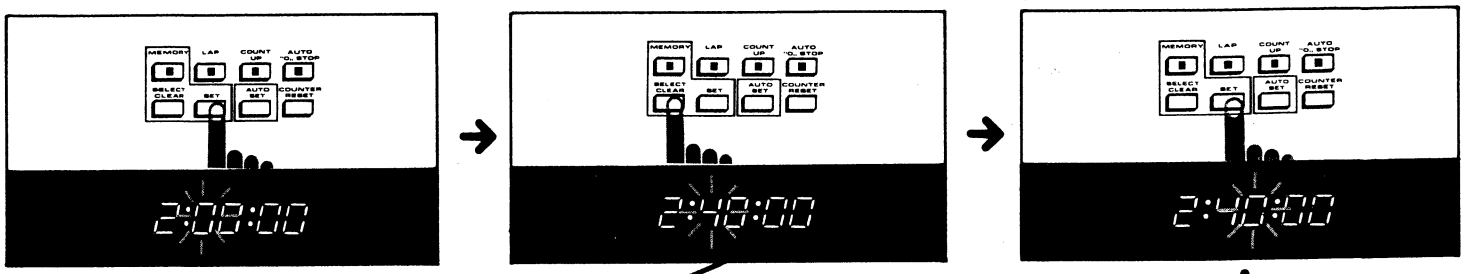
Depress the SET button. The 10^S minute indicator will flash on and off.

4 Set the 10^S minutes

Depress the SELECT/CLEAR button and set the 10^S minute indicator to "4".

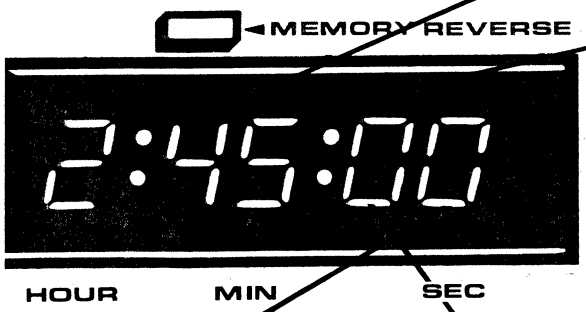
5

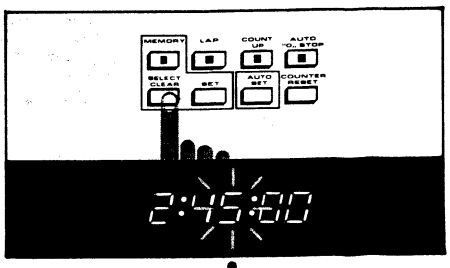
Depress the SET button. The 1^S minute indicator will flash on and off.



6 Set the 1^S minutes

Depress the SELECT/CLEAR button and set the 1^S minute indicator to "5".





9 Set the 1^S second

Depress the SET button again. The 1^S indicator will remain at "0" and stop flashing. The MEMORY REVERSE indicator will light to show that memory auto reverse will take place.

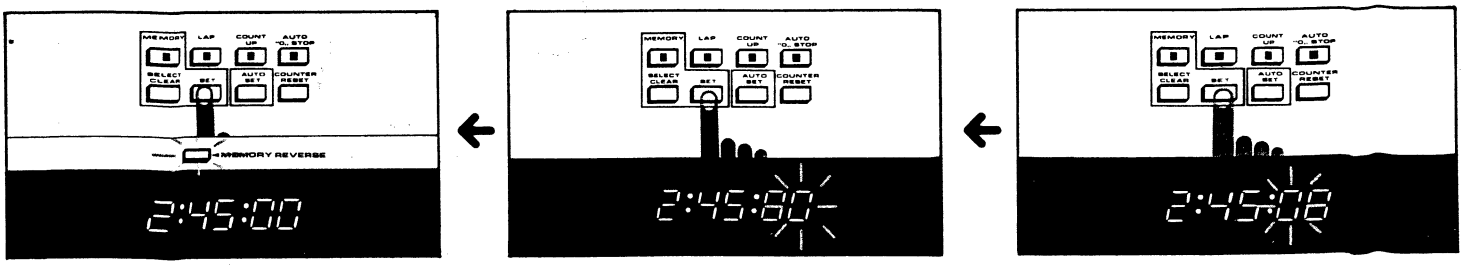
* After you have set the 1^S second indicator, always depress the SET button to memorize the preset memory.

8 Set the 10^S seconds

Depress the SET button again. The 10^S second indicator will remain at "0" and the 1^S second indicator will flash on and off.

7

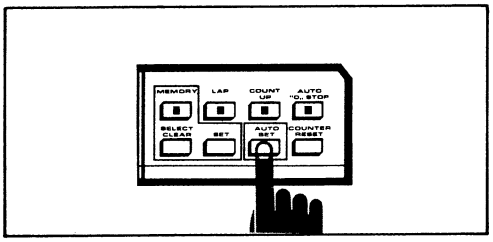
Depress the SET button. The 10^S second indicator will flash on and off.



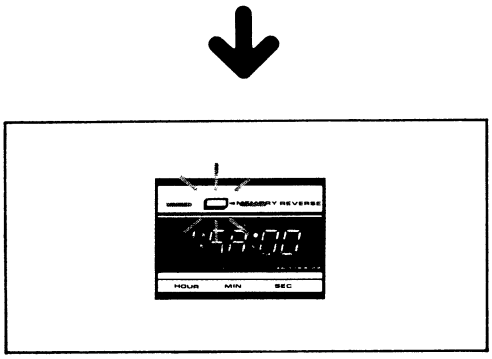
Quick memory auto reverse

* If a tape has sensing tapes, the tape travel direction will be automatically reversed when a Tension Arm comes into contact with a sensing tape.

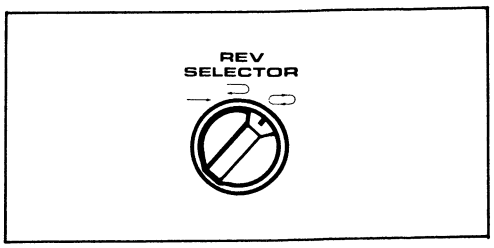
1



Depress the AUTO SET button. The tape travel direction will be automatically changed from forward to reverse. The time at which the AUTO SET button was depressed will be memorized. This time is called "quick memory".

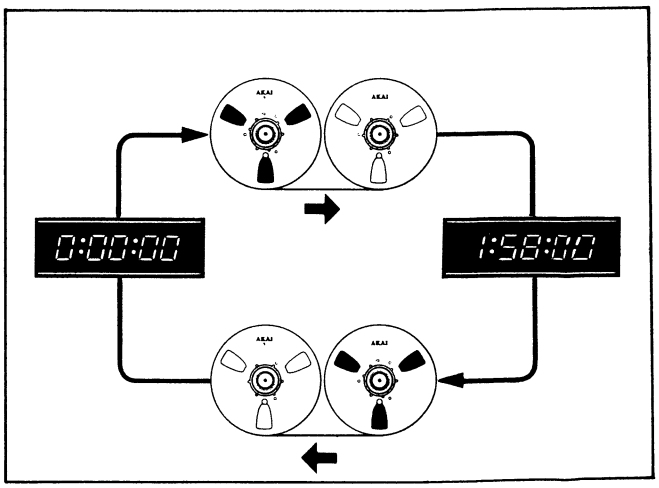


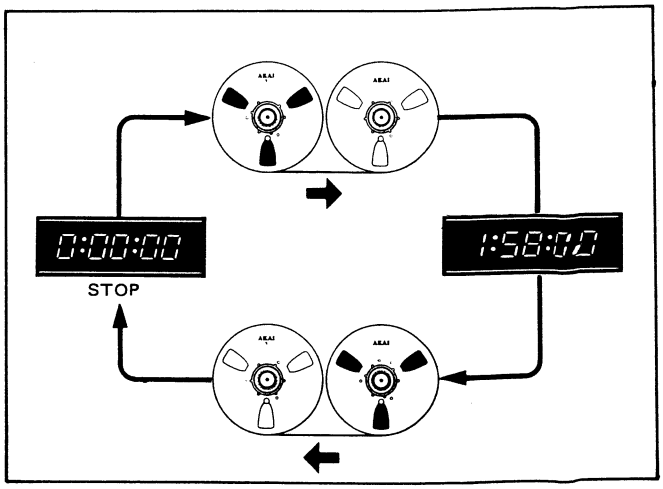
2



If the REV SELECTOR was set to continuous (⇄), the tape travel direction will be repeatedly changed at the quick memory and the time counter reading of "0:00:00".

* During recording, the tape travel direction will not be changed at the time counter reading of "0:00:00".





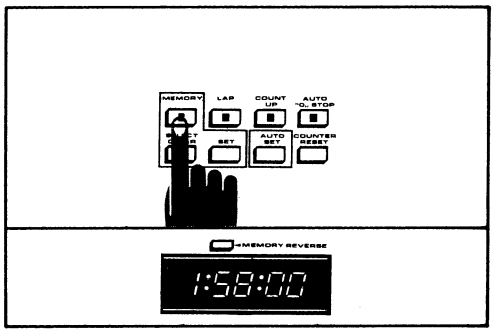
Attention:

The AUTO SET button will not function under the following conditions:

- The MEMORY REVERSE button's indicator is lit.
- The MEMORY button's indicator is lit.
- The tape is traveling in the reverse direction.

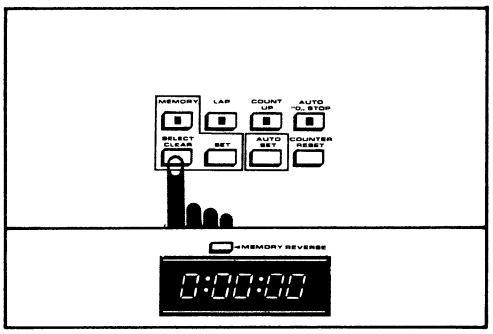
• To cancel preset memory or quick memory after it has been set

1



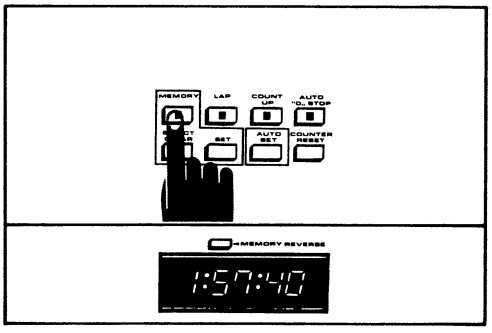
Depress the MEMORY button.
Its indicator will light and the Electronic Digital Counter will be set to memory indicator.

2



Depress the SELECT/CLEAR button.
"0:00:00" will be displayed and the hour indicator will flash on and off.

3

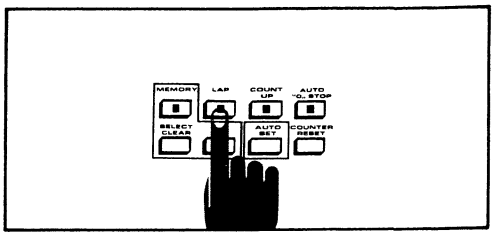


Depress the MEMORY button again.
Its indicator and the MEMORY REVERSE indicator will go off and the Electronic Digital Counter will be reset to time counter.

Lap counter

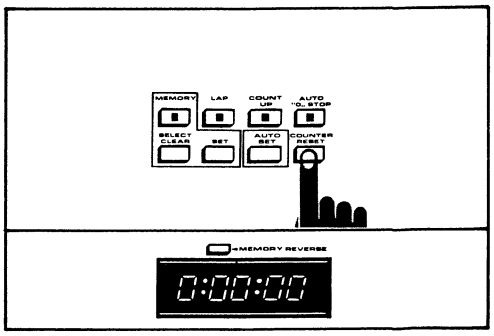
* The lap counter cannot function if the MEMORY REVERSE indicator is lit. If it is, follow the procedure under "How to cancel preset memory or quick memory after it has been set".

1



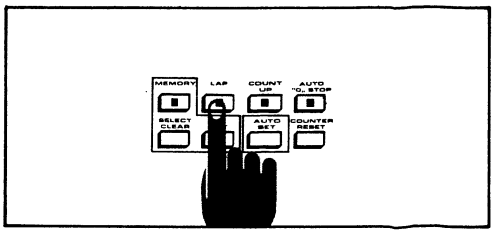
Depress the LAP button.
Its indicator will light and the Electronic Digital Counter will be set to lap counter.

2



When you come to the point you want to start timing, depress the COUNTER RESET button to reset the lap counter to "0:00:00".

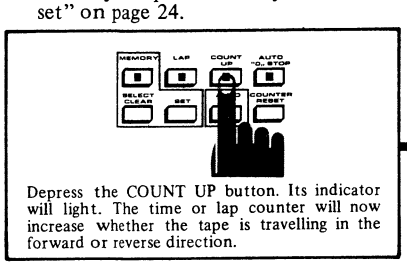
3



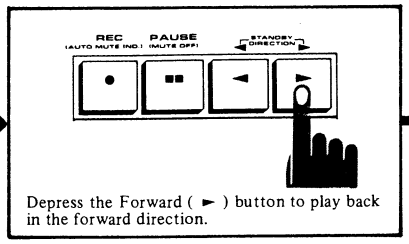
To reset the Electronic Digital Counter to time counter, depress the LAP button again.

Count up

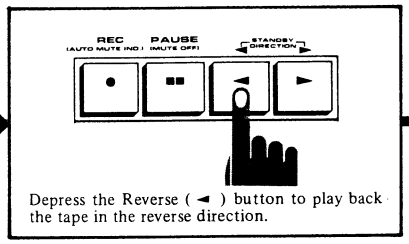
* The count up cannot function if the MEMORY REVERSE indicator is lit. If it is, follow the procedure under "How to cancel preset memory or quick memory after it has been set" on page 24.



Depress the COUNT UP button. Its indicator will light. The time or lap counter will now increase whether the tape is travelling in the forward or reverse direction.

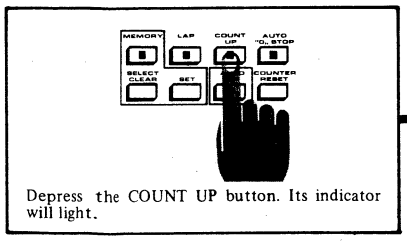


Depress the Forward (►) button to play back in the forward direction.

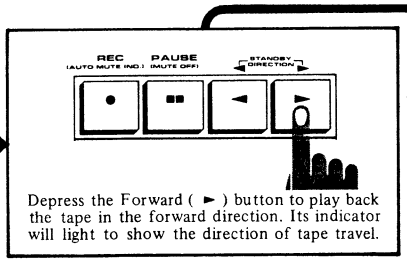


Depress the Reverse (◄) button to play back the tape in the reverse direction.

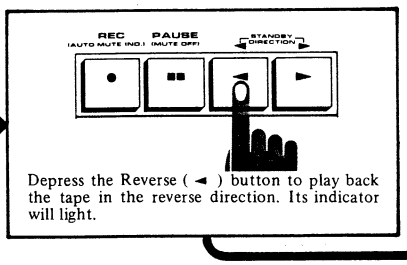
The time or lap counter will increase or decrease during fast forward or rewind, depending on the direction of tape travel.



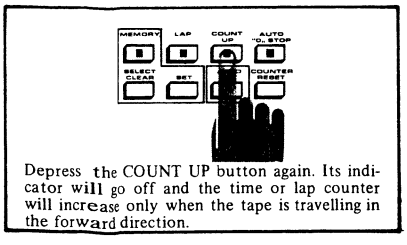
Depress the COUNT UP button. Its indicator will light.



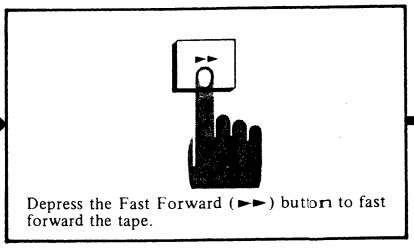
Depress the Forward (►) button to play back the tape in the forward direction. Its indicator will light to show the direction of tape travel.



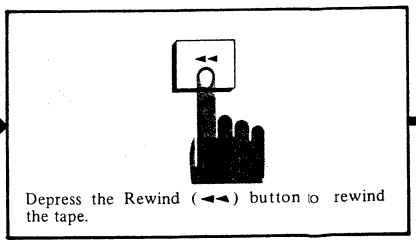
Depress the Reverse (◄) button to play back the tape in the reverse direction. Its indicator will light.



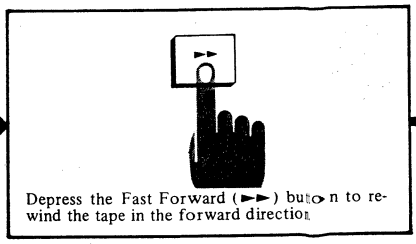
Depress the COUNT UP button again. Its indicator will go off and the time or lap counter will increase only when the tape is travelling in the forward direction.



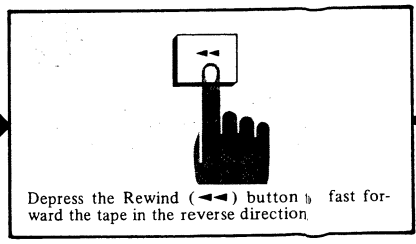
Depress the Fast Forward (►►) button to fast forward the tape.



Depress the Rewind (◄◄) button to rewind the tape.



Depress the Fast Forward (►►) button to rewind the tape in the forward direction.



Depress the Rewind (◄◄) button to fast forward the tape in the reverse direction.

(INCREASE) Reverse (INCREASE)

1.2.3.4. ⟶ 5.6.7·····

The time or lap counter will increase and will keep on increasing when the tape travel is changed from forward to reverse.

(INCREASE) Reverse (INCREASE)

1.2.3.4. ⟶ 5.6.7·····

The time or lap counter will increase and will keep on increasing when the tape travel is changed from reverse to forward.

(INCREASE)

1.2.3.4.5.6.7·····

The tape will be fast forwarded and the time or lap counter will increase.

(DECREASE)

15.14.13.12.11.10·····

The tape will be rewound and the time or lap counter will decrease.

(DECREASE)

15.14.13.12.11.10·····

The tape will be rewound and the time or lap counter will decrease.

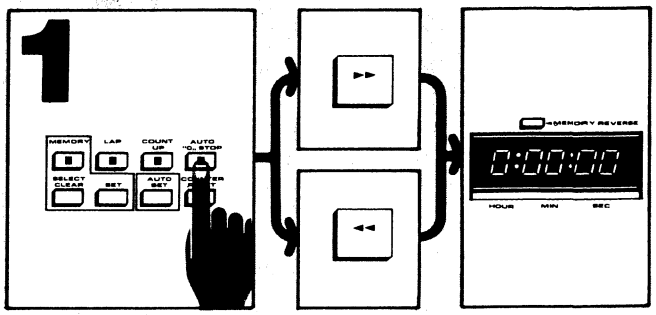
(INCREASE)

1.2.3.4.5.6.7·····

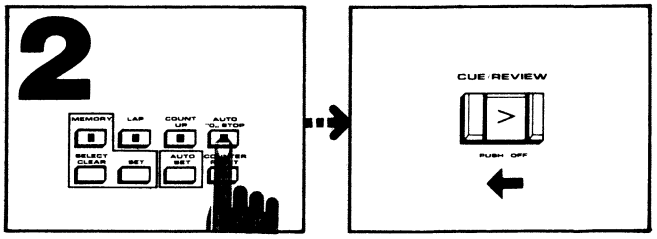
The tape will be fast forwarded and the time or lap counter will increase.

Auto "0" stop

* The auto "0" stop cannot function if the MEMORY REVERSE indicator is lit. If it is, follow the procedure under "How to cancel preset memory or quick memory after it has been set" on page 24.



Depress the AUTO "0" STOP button. Its indicator will light. Depress the Rewind (◄◄) or Fast Forward (►►) button, depending on the direction of tape travel. When the time or lap counter is decreased to "0:00:00", the tape will stop.



To cancel the auto "0" stop, depress the AUTO "0" STOP button again. Its indicator will go off.

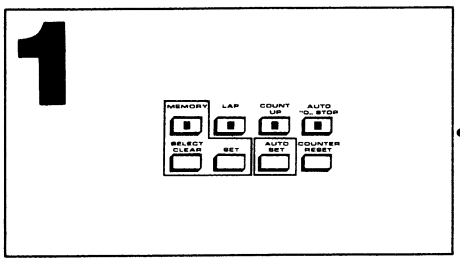
* Make sure that the CUE/REVIEW lever is not engaged during auto "0" stop.

• Notes on counter auto system

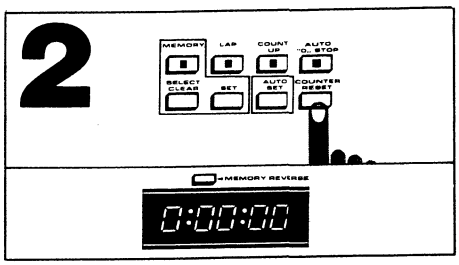
1. The lap counter, counter up and auto "0" stop can be used in combination with each other.
2. The lap counter, counter up and auto "0" stop cannot function if the MEMORY REVERSE indicator is lit. In such a case, follow the procedure under "How to cancel preset memory or quick memory after it has been set" on page 24.
3. Memory auto reverse can be set during counter up or auto "0" stop operation. Once a memory auto reverse is set (when the MEMORY REVERSE indicator lights), the COUNT UP or AUTO "0" STOP button's indicator will go off.
   * If the memory auto reverse is canceled (the MEMORY REVERSE indicator is off), the AUTO "0" STOP or COUNT UP button's indicator will light and its operation will take place.
4. To go from lap counter to memory auto reverse operation, depress the LAP button and cancel the lap counter first.

TO FIND THE BEGINNING OF A SELECTION USING THE LAP COUNTER, COUNT UP AND AUTO "0" STOP

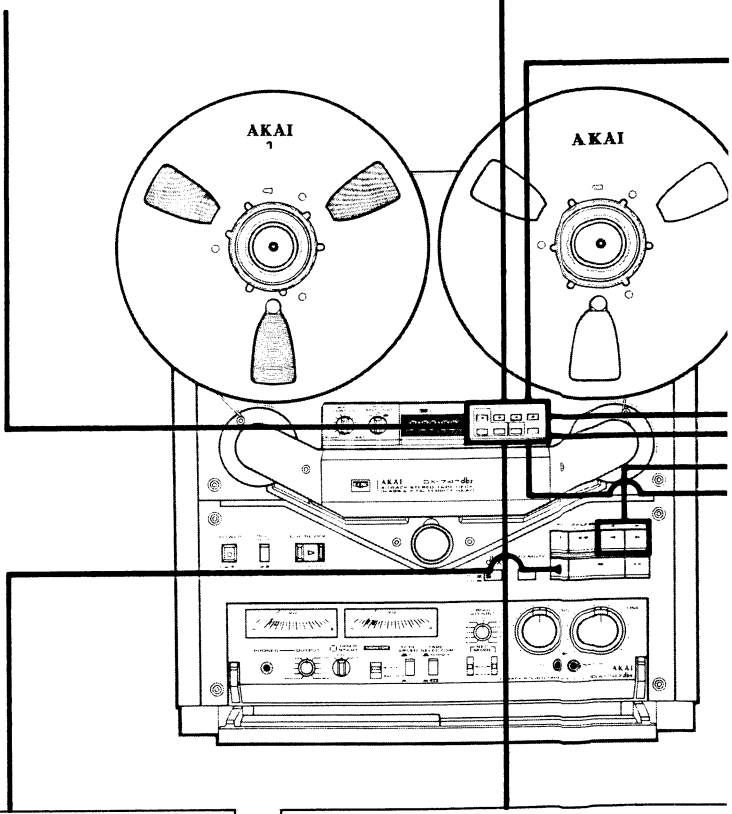
- When the tape is travelling in the forward direction

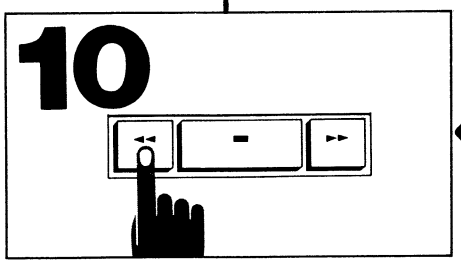


Make sure that all the indicators are off and that the Electronic Digital Counter is set to time counter.

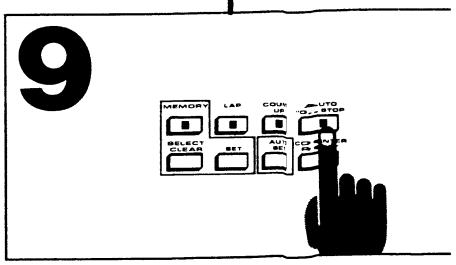


Depress the COUNT RESET button to reset the time counter to "0:00:00".

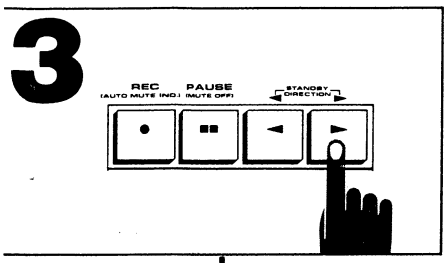




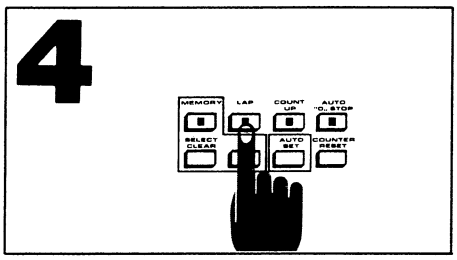
Depress the Rewind (◄◄) button. The tape will be rewound to the lap counter reading of "0:00:00" and stop.



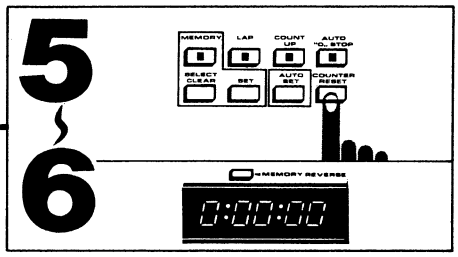
Depress the AUTO "0" STOP button. Its indicator will light.



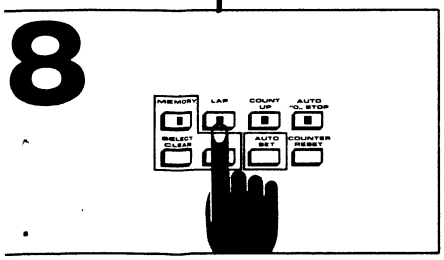
Play back the tape.



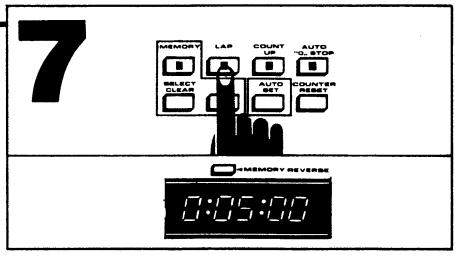
Depress the LAP button to set the Electronic Digital Counter to lap counter. Its indicator will light.



Just before the selection you want to listen to again is played back, depress the COUNTER RESET button to reset the lap counter to "0:00:00".

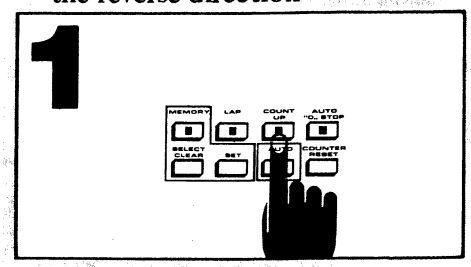


Depress the LAP button again. The Electronic Digital Counter will be set to lap counter again.



At the end of the selection, you can tell how long the selection was by looking at the lap counter. If you depress the LAP button again, the Electronic Digital Counter will be set to time counter and you can tell how long you have been playing back from the beginning.

• When the tape is travelling in the reverse direction



Depress the COUNT UP button just before the tape travel direction is reversed.

2

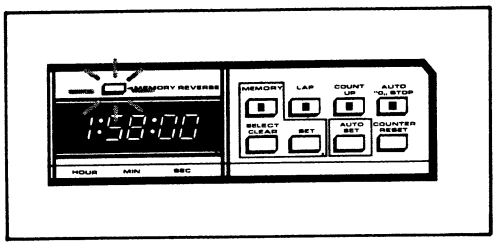
Carry out the same operation as when the tape is travelling in the forward direction except for step 3 and in step 10, depress the Fast Forward (►►) button instead of the Rewind (◄◄) button.

HOW TO CARRY OUT MEMORY AUTO REVERSE DURING RECORDING OR PLAYBACK

* If the tape has sensing tapes, the tape travel direction will be automatically reversed when a Tension Arm comes in contact with a sensing tape.

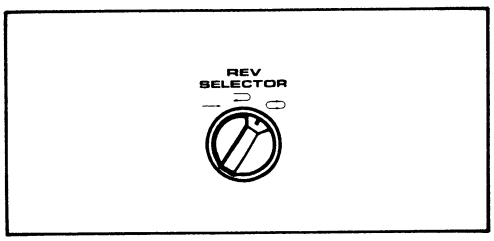
• Preset memory auto reverse recording or playback

1

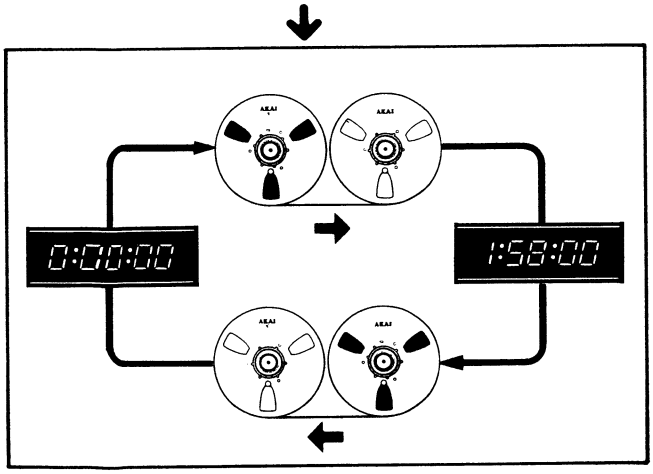


Follow the procedure under "Preset memory auto reverse" on pages 21 and 22 and set the preset memory.
Make sure the MEMORY REVERSE indicator is lit.

2



Refer to the chart on the next page and set the REV SELECTOR.

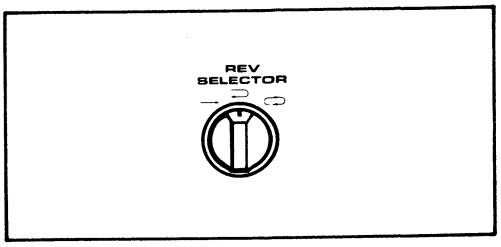


If the REV SELECTOR was set to continuous (⇄), the tape travel direction will be repeatedly reversed at the quick memory and "0:00:00".

If the REV SELECTOR was set to one-cycle (⇉), the tape travel direction will be reversed at the preset memory only. The same thing applies during recording even if the REV selector was set to (⇄).

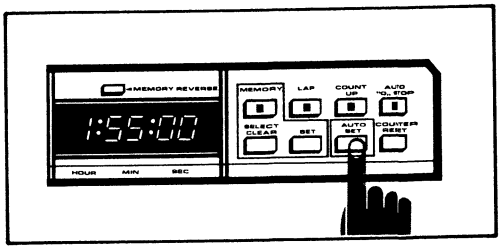
• Quick memory auto reverse recording or playback

1



Refer to the chart on the next page and set the REV SELECTOR.

2



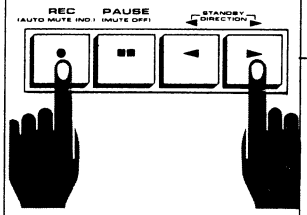
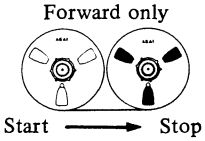
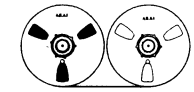
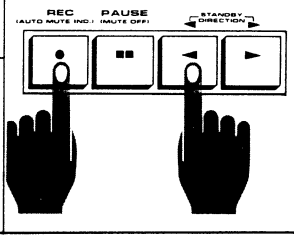
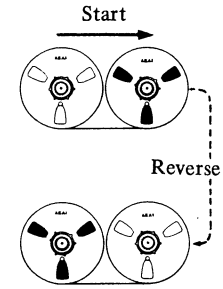
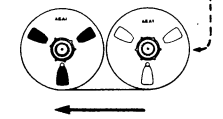
When you want to reverse the tape travel direction, depress the AUTO SET button.

3

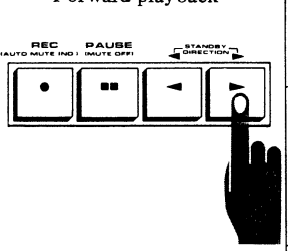
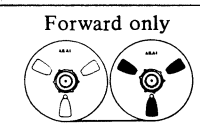
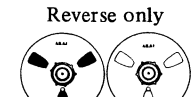
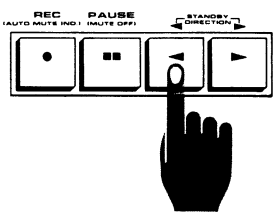
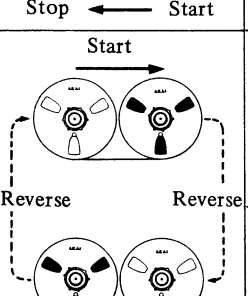
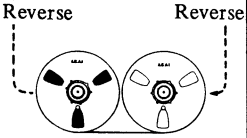
If the REV SELECTOR was set to continuous (⇄), the tape travel direction will be repeatedly reversed at the preset memory and "0:00:00".
If the REV SELECTOR was set to one-cycle (⇉), the tape travel direction will be reversed at the quick memory only. The same thing applies during recording even if the REV SELECTOR was set to (⇄).

MEMORY AUTO REVERSE AND THE REV SELECTOR

RECORDING

Position of REV SELECTOR		Operating button	Tape travel	Operation
One-way		Forward recording 	Forward only  Start ⟶ Stop	• **Preset memory auto reverse** The tape travel direction will not be reversed at preset memory. The deck will go into stop mode at the end of the tape. • **Quick memory auto reverse** The tape travel direction will not be reversed when the AUTO SET button is depressed. The deck will go into stop mode at the end of the tape.
			Reverse only  Stop ⟵ Start	• **Preset memory auto reverse** The tape travel direction cannot be reversed. The deck will go into stop at the end of the tape. • **Quick memory auto reverse** The tape travel direction cannot be reversed. The deck will go into stop mode at the end of the tape.
One-cycle (Forward → reverse only)		Reverse recording 	Start ⟶  Reverse  ⟵ Stop	• **Preset memory auto reverse** The tape travel direction will be reversed at preset memory. The deck will go into stop mode at the end of reverse recording. • **Quick memory auto reverse** The tape travel direction will be reversed when the AUTO SET button is depressed. The deck will go into stop mode at the end of reverse recording. * During recording, even if the REV SELECTOR is set to (⟲), the deck will go into one-cycle recording to prevent recording over of already recorded tape. * If recording is started from the reverse direction, the deck will go into stop mode at the end of reverse recording.
Continuous (Forward → reverse only)				

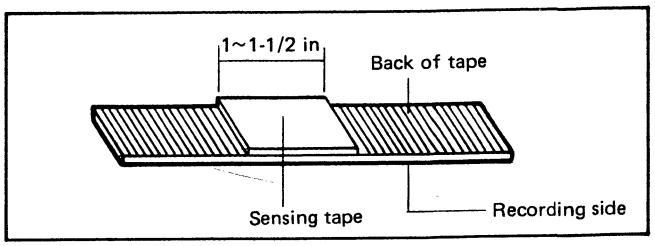
PLAYBACK

Position of REV SELECTOR		Operating button	Tape travel	Operation
One-way		Forward playback 	Forward only  Start ⟶ Stop	• **Preset memory auto reverse** The tape travel direction will not be reversed at preset memory. The deck will go into stop mode at the end of the tape. • **Quick memory auto reverse** The tape travel direction will not be reversed when the AUTO SET button is depressed. The deck will go into stop mode at the end of the tape.
			Reverse only  Stop ⟵ Start	• **Preset memory auto reverse** The tape travel direction cannot be reversed. The deck will go into stop mode at the end of the tape. • **Quick memory auto reverse** The tape travel direction cannot be reversed. The deck will go into stop mode at the end of the tape.
One-cycle (Forward → reverse only)		Reverse playback 	Start ⟶  Reverse Reverse  ⟵ Stop	• **Preset memory auto reverse** The tape travel direction will be reversed at preset memory. The deck will go into stop mode at the end of reverse playback. • **Quick memory auto reverse** The tape travel direction will be reversed when the AUTO SET button is depressed. The deck will go into stop mode at the end of reverse playback. * If playback is started from the reverse direction, the deck will go into stop mode at the end of reverse playback.
Continuous				• **Preset memory auto reverse** The tape travel direction will be repeatedly reversed at preset memory and "0:00:00" until the Stop (■) button is depressed. • **Quick auto reverse memory** The tape travel direction will be repeatedly reversed at quick memory and "0:00:00" until the Stop (■) button is depressed.

AUTOMATIC REVERSE USING SENSING TAPES

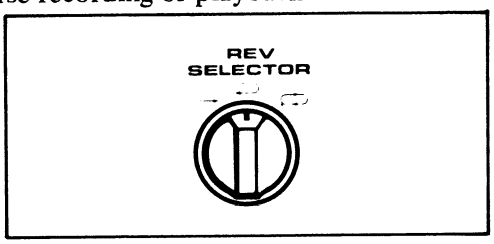
• Before operation

To automatically reverse the tape travel direction, attach 1 to 1-1/2 in of standard accessory sensing tape to the back surface of the tape at the point where the tape travel direction is to be changed.



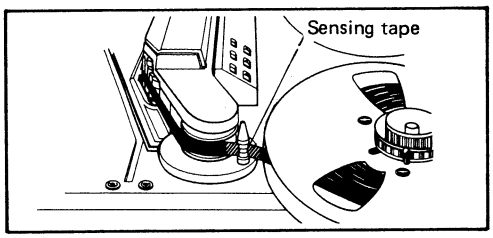
• Auto reverse recording or playback

1



Refer to the chart on the next page to set the REV SELECTOR.

2

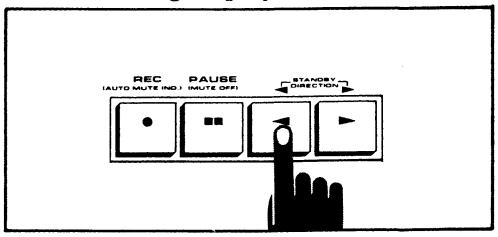


When a Tension Arm comes in contact with a sensing tape, the tape travel direction will be reversed.

* Attach the sensing tape only at the point where you want the tape travel direction to reverse.
* Tape travel direction cannot change from reverse to forward.
* When recording with a prerecorded tape, approximately 1 second of tape will not be erased when the tape travel is changing from forward to reverse. Please manually erase this section.
* During recording, the input signals will be cut for approximately 2 seconds when the tape travel direction is changing.

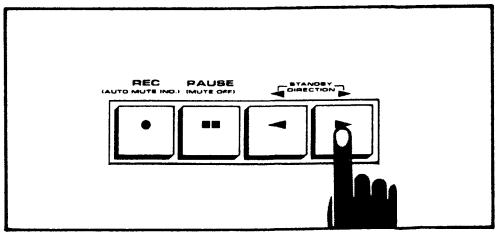
• Manual reverse recording or playback

1



If the tape is travelling in the forward direction, depress the Reverse (◄) button.

2

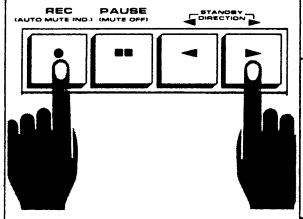
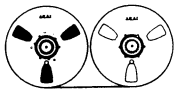
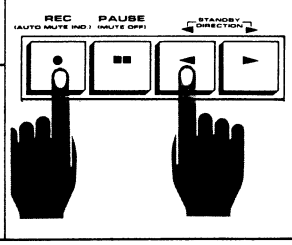
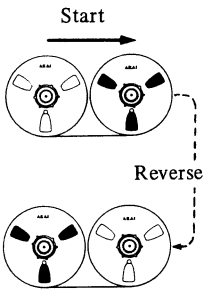


If the tape is travelling in the reverse direction, depress the Forward (►) button.

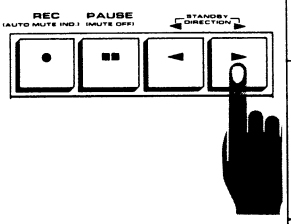
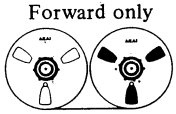
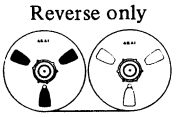
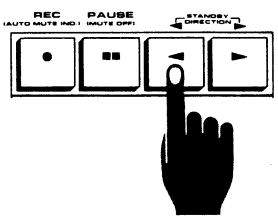
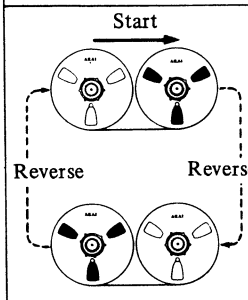
* The position of the REV SELECTOR does not matter during manual reverse.

REV SELECTOR

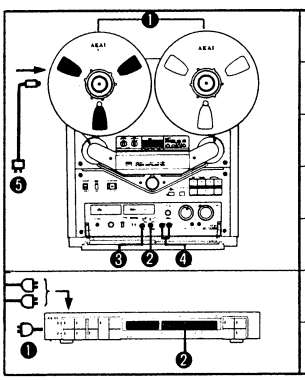
RECORDING

Position of REV SELECTOR		Operating button	Tape travel	Operation
One-way		Forward recording 	Forward only Start ⟶ Stop	1. When the Recording (REC ●) and Forward (►) buttons are depressed simultaneously, recording in forward direction is possible. * The deck will go into stop mode at the end of the tape.
			Reverse only  Stop ⟵ Start	2. When the Recording (REC ●) and Reverse (◄) buttons are depressed simultaneously, recording in reverse direction is possible. * The deck will go into stop mode at the end of the tape.
One-cycle (Forward → reverse only)		Reverse recording 	Start  Reverse Stop	3. When the Recording (REC ●) and Forward (►) buttons are depressed simultaneously, after one-cycle (forward to reverse only) of recording is complete (all the tape is taken up on one reel) the deck will go into stop mode. * During recording, even if the REV SELECTOR is set to ⟲, the deck will go into one-cycle recording to prevent recording over of already recorded tape.
Continuous (Forward → reverse only)				3. When the Recording (REC ●) and Reverse (◄) buttons are depressed simultaneously, recording in reverse direction only is possible.

PLAYBACK

Position of REV SELECTOR		Operating button	Tape travel	Operation
One-way		Forward playback 	Forward only  Start ⟶ Stop	1. When the Forward (►) button is depressed, playback in forward direction is possible. * The deck will go into stop mode at the end of the tape.
			Reverse only  Stop ⟵ Start	2. When the Reverse (◄) button is depressed, playback in reverse direction is possible. * The deck will go into stop mode at the end of the tape.
One-cycle (Forward → reverse only)		Reverse playback 	Start  Reverse Reverse Stop	3. When the Forward (►) button is depressed, after one-cycle (forward to reverse only) of playback is complete (all the tape is taken up on one reel) the deck will go into stop mode.
Continuous				4. When the Forward (►) or the Reverse (◄) button is depressed, the deck will go into continuous playback. Depress the stop (■) button to stop playback.

ABSENTEE RECORDING

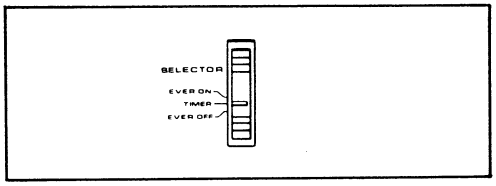


Make sure that the tape is long enough for the duration of absentee recording.
The TAPE SELECTOR and the BIAS ADJUST control are set to the type of tape loaded.
The TAPE SPEED selector is set to the desired speed.
Both the "L" and "R" REC MODE selectors are set to ON.
The standard accessory AC adaptor MP-515 is connected. This is only if memory auto reverse is to take place.
All the components are connected securely to the timer.
The timer has been set correctly to the actual time.

Attention: * **After you have set the timer, step 7 of below, do not disconnect or connect the AC adaptor MP-515. This might cause the deck to malfunction. Also, connect the AC adaptor MP-515's power cord securely to a household AC outlet.**
* **Refer to the timer's operator's manual first.**

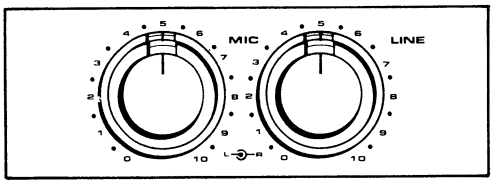
- How to operate

1



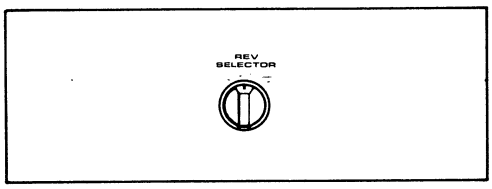
Set the timer so that the connected components are turned on.

2



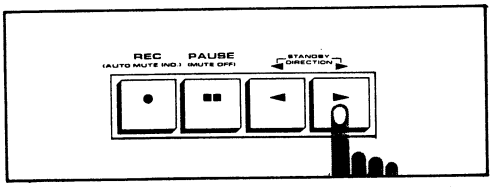
Refer to "stereo recording" and set the recording input levels.

3



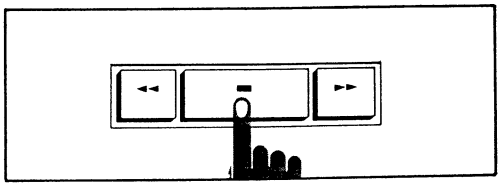
Set the REV SELECTOR.

4



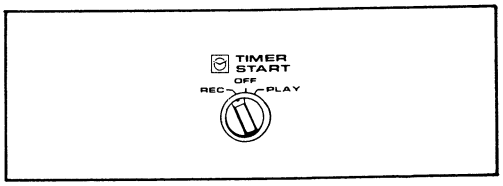
Depress the Forward (►) button if recording in the forward direction. Confirm the direction by making sure that the button's indicator is lit.
Depress the Reverse (◄) button if recording in the reverse direction. Confirm the direction by making sure that the button's indicator is lit.

5



Depress the Stop (■) button to stop the tape.

6



Set the TIMER START selector to REC.

7

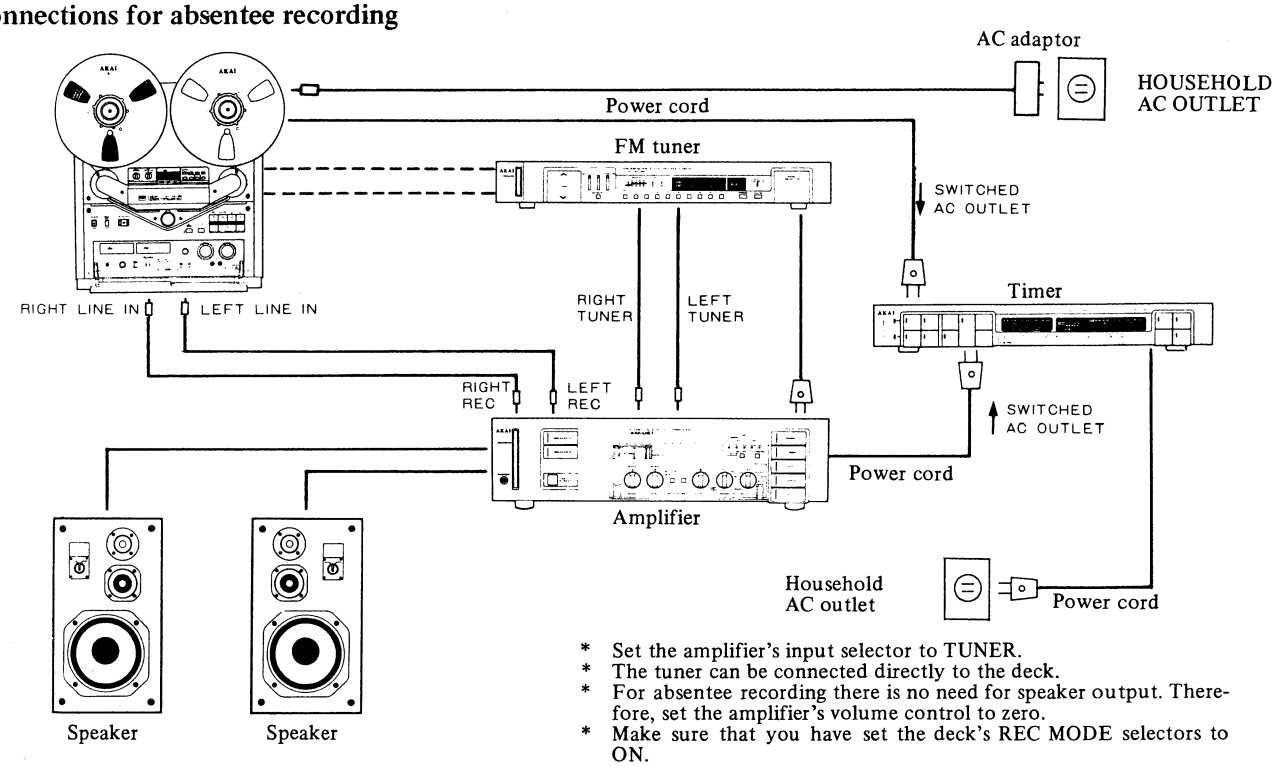
Set the timer to turn on and off the connected components.

8

All the connected components will be turned off.

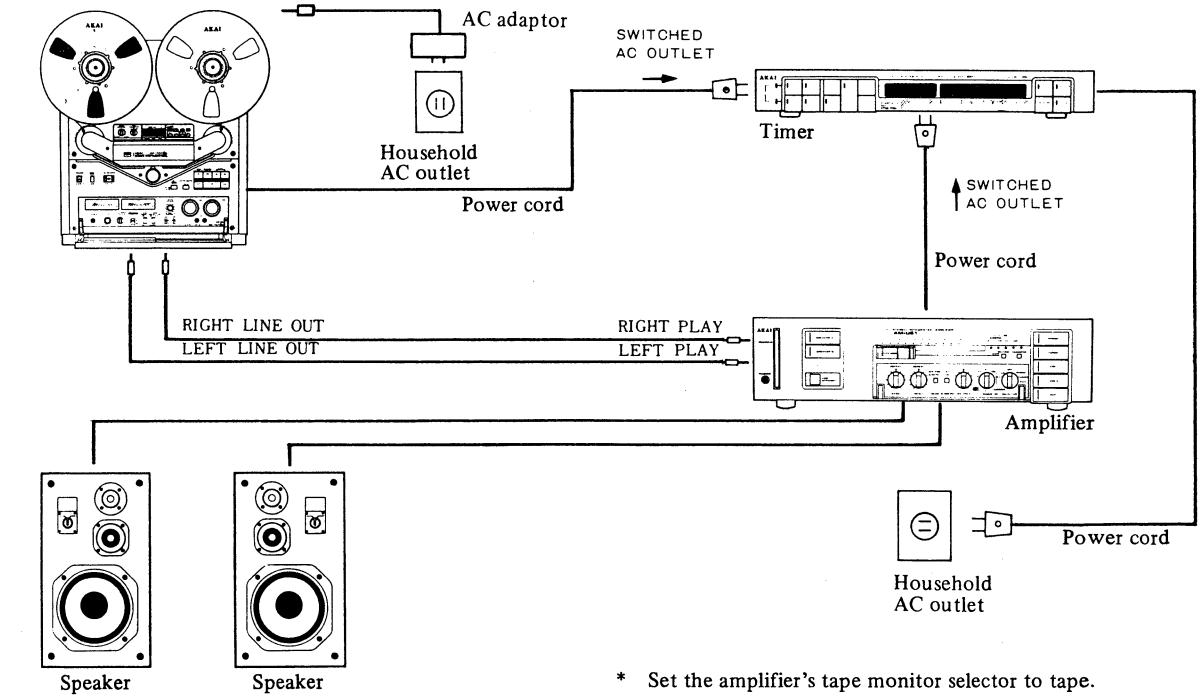
- After absentee recording, always set the TIME START selector to OFF before turning on the deck.

Connections for absentee recording



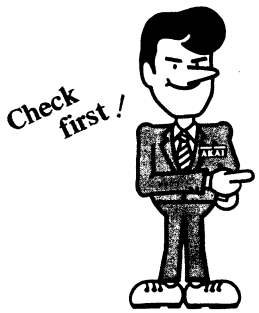
* Set the amplifier's input selector to TUNER.
* The tuner can be connected directly to the deck.
* For absentee recording there is no need for speaker output. Therefore, set the amplifier's volume control to zero.
* Make sure that you have set the deck's REC MODE selectors to ON.

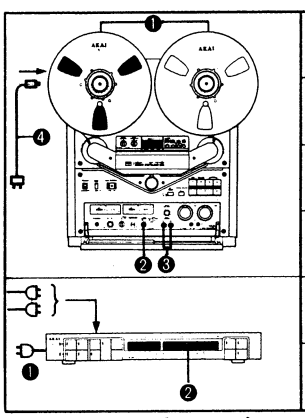
Connections for timed playback



* Set the amplifier's tape monitor selector to tape.

TIMED PLAYBACK



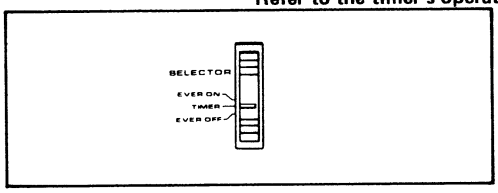


The TAPE SELECTOR is set to the type of tape loaded.
The TAPE SPEED selector is set to the speed at which the tape was recorded.
Both the "L" and "R" REC MODE selectors are set to OFF.
The standard accessory AC adaptor MP-515 is connected. This is only if memory auto reverse is to take place.
All the components are connected securely to the timer.
The timer has been set correctly to the actual time.

Attention: * **After you have set the timer, step 7 of below, do not disconnect or connect the AC adaptor MP-515. This might cause the deck to malfunction. Also, connect the AC adaptor MA-515's power cord securely to a household AC outlet.**
* **Refer to the timer's operator's manual first.**

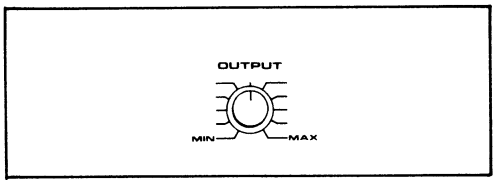
- How to operate

1



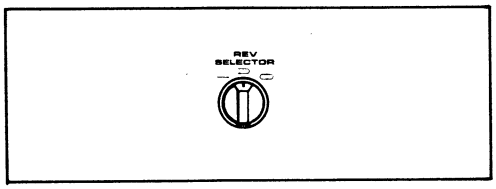
Set the timer so that the connected components are turned on.

2



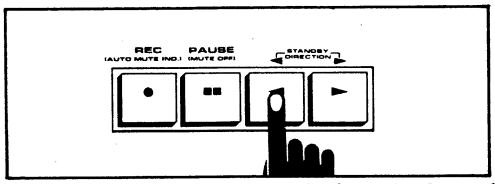
Refer to "stereo playback" and set the speakers' output level.

3



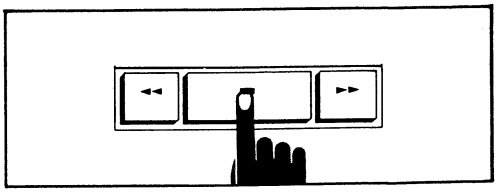
Set the REV SELECTOR.

4



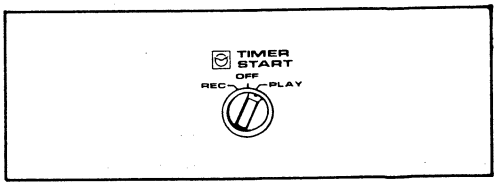
Depress the Forward (►) button if playing back in the forward direction. Confirm the direction by making sure that the button's indicator is lit.
Depress the Reverse (◄) button if playing back in the reverse direction. Confirm the direction by making sure that the button's indicator is lit.

5



Depress the Stop (■) button to stop the tape.

6



Set the TIMER START selector to PLAY.

7

Set the timer to turn on and off the connected components.

8

All the connected components will be turned off.

- After timed playback, always set the TIMER START selector to OFF before turning on the deck.

TAPE DUBBING

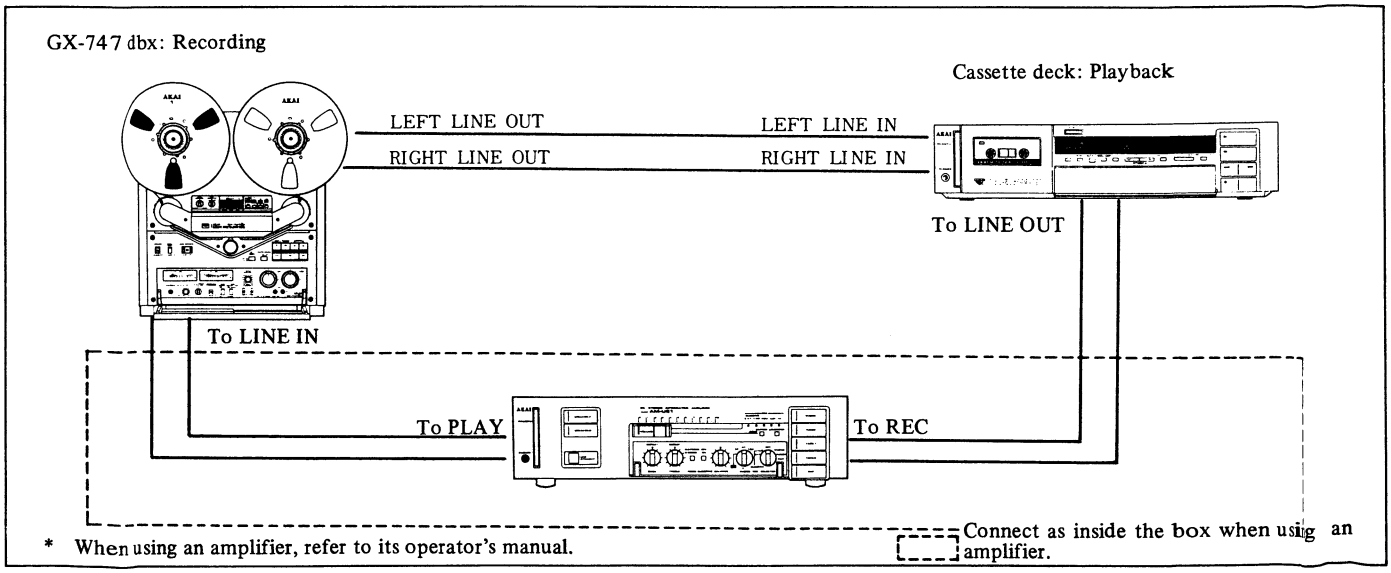
Follow the procedure outlined below to make an exact copy of a recorded tape or to edit and change the order of programs.

Dubbing from the GX-747 dbx to a cassette deck

- **Connect an additional cassette deck.**
- **Refer to the connections diagram on page 8 or the one below.**
- **Switch on the power to all the components.**

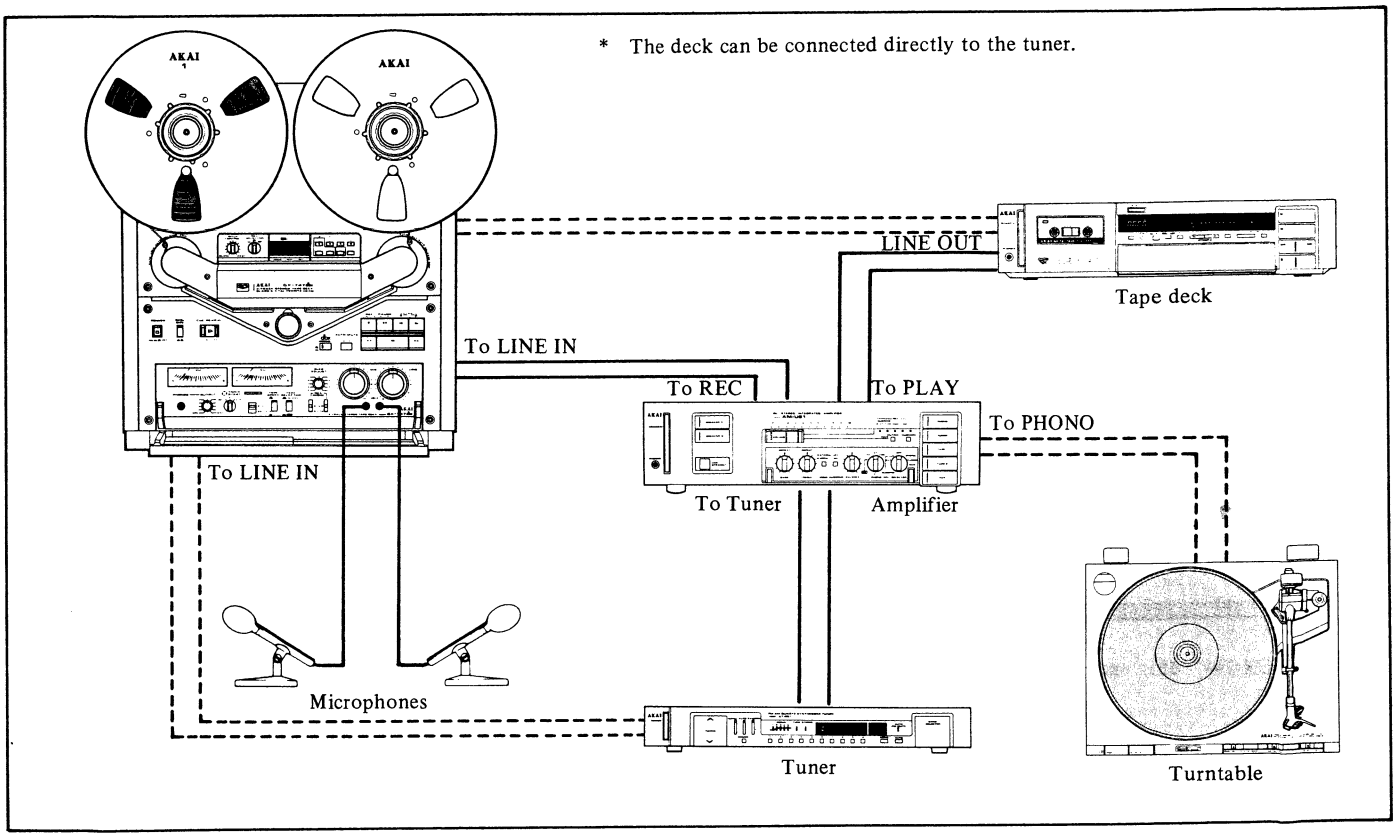
PLAYBACK DECK		RECORDING DECK
Place the recorded tape on the GX-747 dbx to be used for playback.	1	
	2	Load a blank tape on the deck to be used for recording.
Set the GX-747 dbx to playback.	3	
Set the GX-747 dbx's OUTPUT control to maximum. (OUTPUT, MIN, MAX)	4	Set the deck to recording standby. If a 3 head deck is used for recording, set it's Monitor switch to Source. (MONITOR, TAPE, SOURCE)
	5	
Wind the playback tape back to the beginning of the selection. (CUE/REVIEW, PUSH OFF)	6	Adjust the deck's recording level. * **Watch the deck's level meters to check that 0 dB is not exceeded.**
	7	
Put the GX-747 dbx into playback mode.	8	Take the deck out of recording standby into recording. * **Monitor simultaneously if the deck is of a 3-head type. (Please refer to the deck's operator's manual for details.)**
	9	

See respective instructions for pausing.

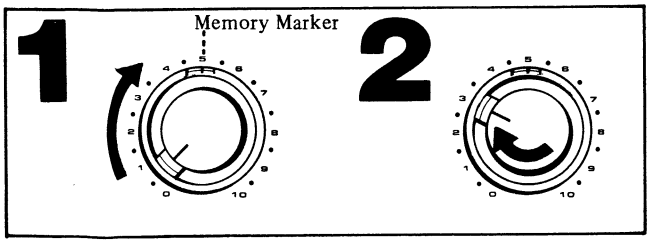


SOUND MIXING

Independent LINE and microphone (MIC) Recording Level controls and input jacks enable signals from microphones and from line sources to be blended and recorded simultaneously on the tape.
Connect a microphone(s) to the MIC jack(s) and connect the desired source to the LINE IN jacks. Follow the recording procedure and adjust both the LINE and MIC Recording Level controls.



• How to use the Memory Markers



You can record so that the volume will gradually increase at the beginning of a selection (fade-in) and gradually decrease at the end (fade-out).
First set the Memory Marker at the optimal recording input level.

Fade-in operation
Gradually turn the recording level controls until mark on the knob reaches the Memory Marker.

Fade-out operation
Gradually decrease the recording level controls to the desired level.

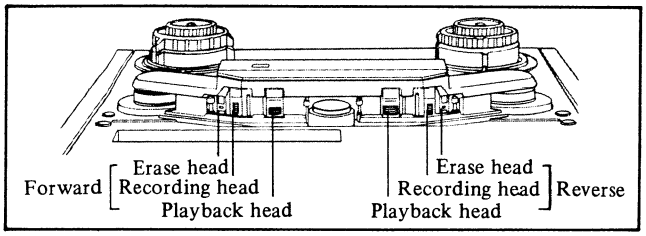
When the recording level controls reach the Memory Marker, they will stop. However, if you turn the recording level controls with a little force, the controls will turn along with the Memory Marker.

TAPE EDITING

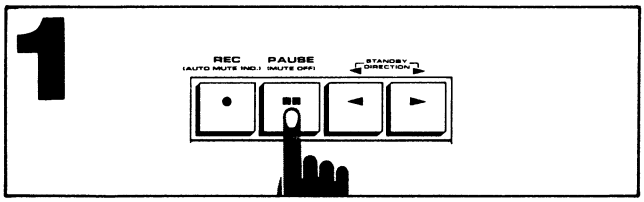
This is a 4 track deck but please follow the procedure below for editing a tape which has a recording in only one direction. If you intend to splice a tape which has recordings in both directions, please remember that the cut on one side will affect the other's recording continuity.

• Marking the beginning of a selection

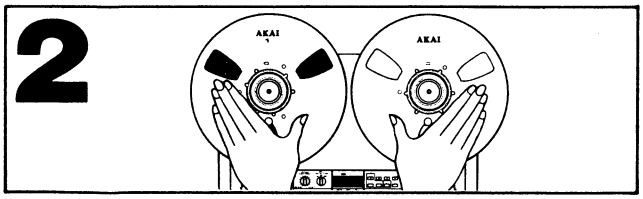
* You can also use the counter auto system (p.27-28) to find the beginning of a selection.



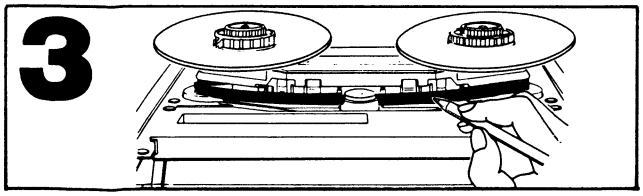
Lay down the deck.



Playback the tape and monitor through headphones or speakers. Depress the PAUSE (▮▮) button at the desired point.



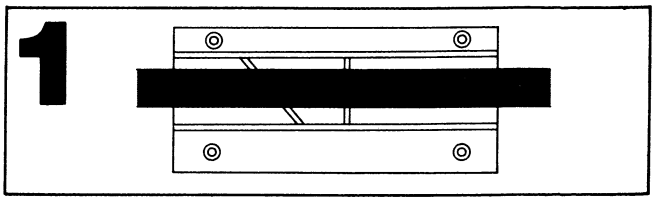
Turn both the reels by hand until the blank portion between songs is reached.



Once the correct position has been reached, take the portion of tape at the middle of the playback head and mark it with a dermatograph available on the market. This is now the beginning of the program.

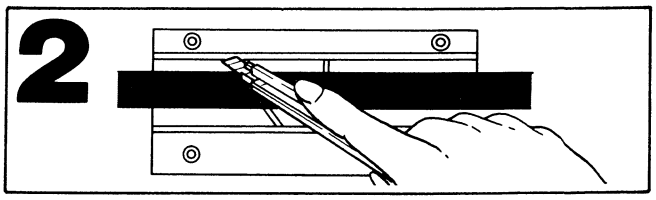
* Please do not mix up the forward and reverse playback heads.

• Tape splicing

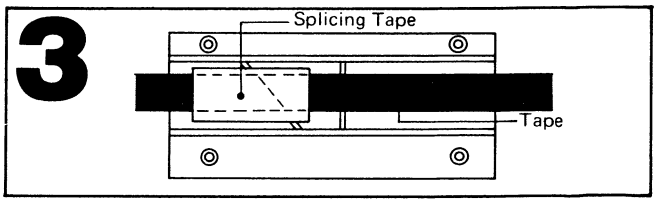


After marking the position place the marked portion into the groove on the standard accessory splicing block.

* **The marker should be over the center of the slanted groove.**



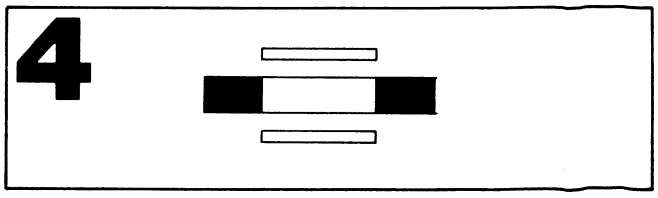
Place the tape to be connected over it and cut into the groove as shown.



Remove the excess tape and affix the splicing tape. Rub firmly with a finger to prevent the splicing tape from coming off.

* **Only use splicing tape for joining tapes.**

* **Attach the splicing tape on the side of the tape which does not touch the heads.**

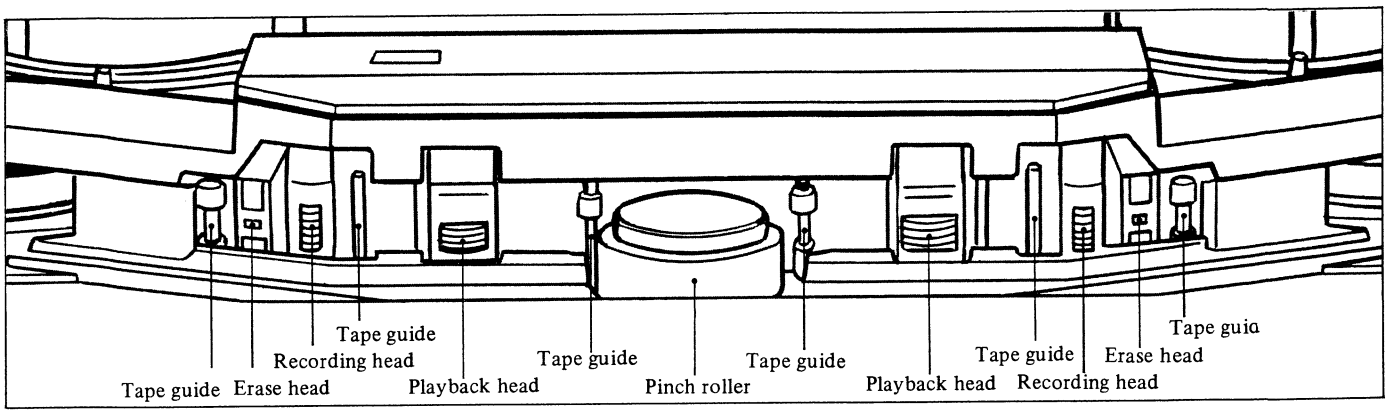


Remove the tape from the block and remove the excess splicing tape.

• When a recorded tape has broken, match the ends and repair with splicing tape.

* **The tape may be cut with scissors but it will adversely affect the recording if magnetized scissors are used.**

MAINTENANCE



• Cleaning

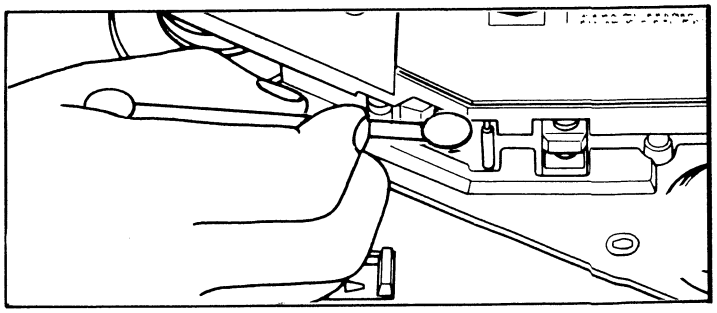
Please use Akai's cleaning kit HC-550P, sold separately.

- Poor high notes
- Dropout
- Non recording

Please clean the recording and playback heads and capstan.

- Partial erasure . . . . .Please clean the erase heads.
- Unstable tape run. . .Please clean the pinch roller, guide roller, capstan, tension arms and tape guides.

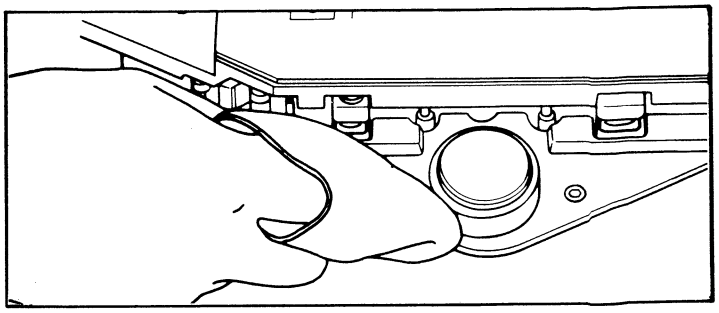
It is particularly important that the parts which come in contact with the tape, like the recording, playback and erase heads, capstan, tension arms and tape guides be cleaned when playing back tapes with splicing tapes.



Method

Please clean with cotton swab sticks dipped in the cleaning fluid. See picture.
The pinch and guide rollers are easily cleaned with a cloth wrung out in cleaning liquid.
Please use a cleaning liquid suitable for rubber for the pinch and guide rollers.

* **Do not use chemicals such as chloroethane, paint thinner, etc. for head block cleaning.**



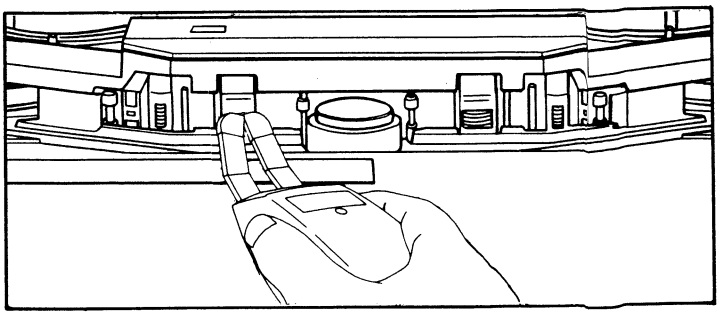
• Demagnetizing (Turn off the POWER Switch.)

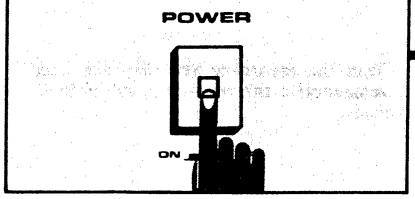
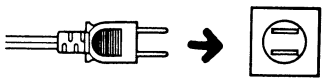
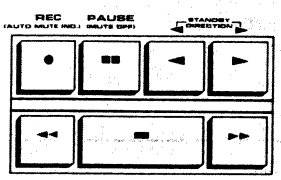
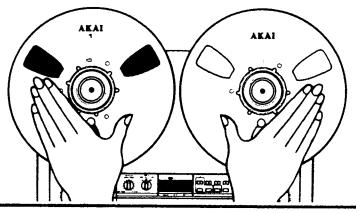
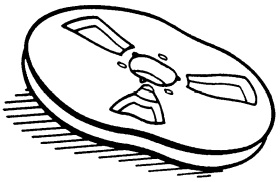
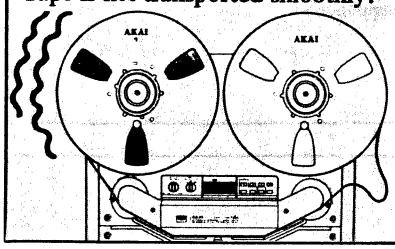
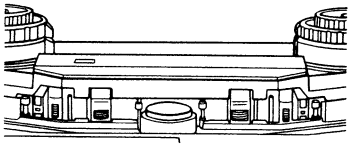
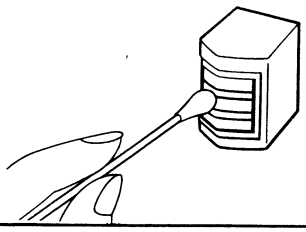
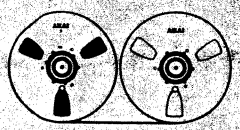
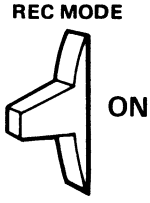
Please use Akai's demagnetizing kit AH-15, sold separately.

- Poor high notes
- Noise

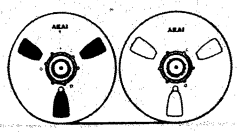
Please demagnetize the recording and playback heads.

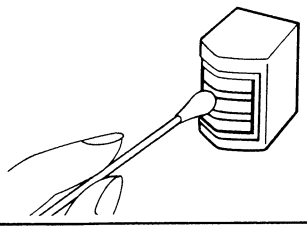
* **Demagnetize the capstan, tension arms and tape guides at the same time.**



Problem	Check point
No power 	 Make sure the power cord is connected securely.
Tape will not travel. 	 Load the tape properly.
	 Change the tape or the reels.
Tape is not transported smoothly. 	 Clean the capstan, pinch roller and guide rollers.
	 Set the TIMER START switch to OFF.
Tape travels when the power is turned on. 	 Clean the erase heads.
Prerecorded music cannot be erased. 	 Set the REC MODE selectors to ON.

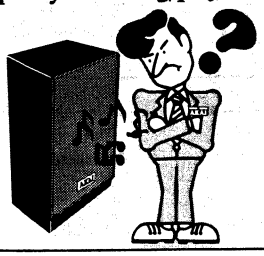
No recording

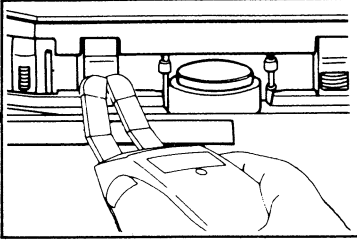




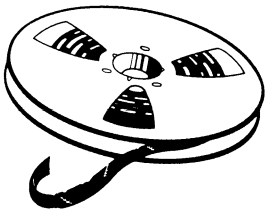
Clean the recording heads.

Poor quality recording/playback



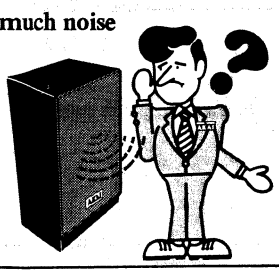


Clean the recording and playback head. Demagnetize the recording and playback heads.

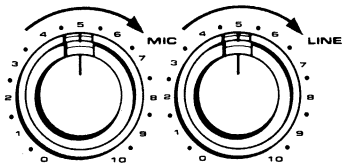


Change the tape.

Too much noise

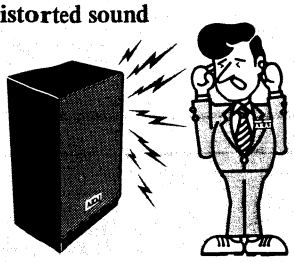


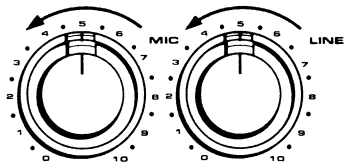
Set the TAPE SELECTOR to the type of tape loaded.



Set the recording input levels to the ideal levels.

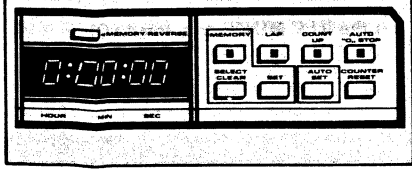
Distorted sound

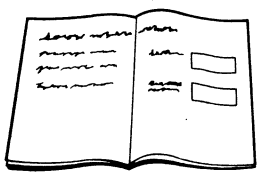




Lower the recording input levels until you do not notice distortions.

Counter auto system will not function properly.





Read p.20-30 of operator's manual again.

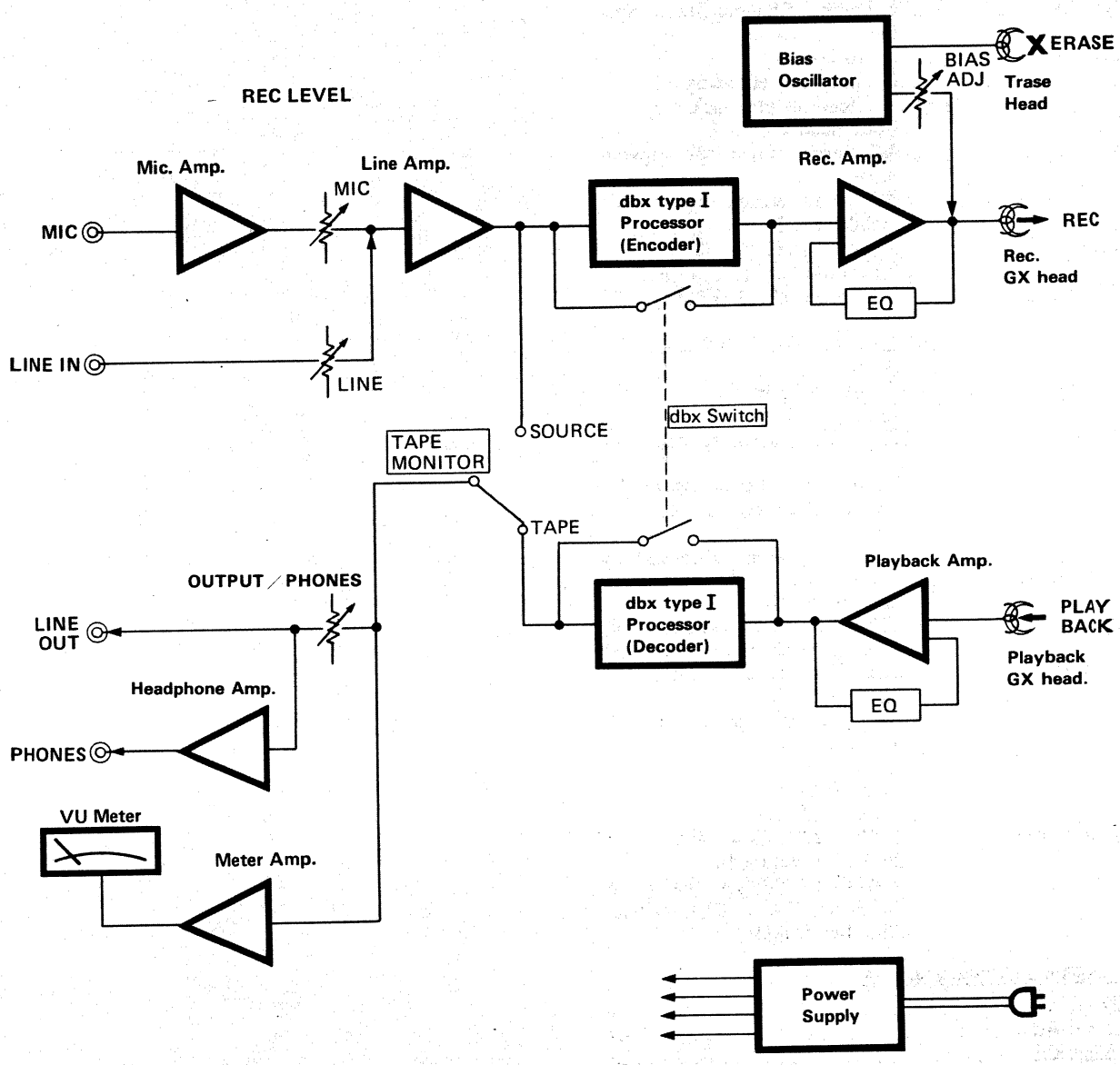
SPECIFICATION

Track System	4 Track 2 Channel Stereo System
Reel Capacity	Up to 10" reel
Heads	GX head for recording x 2 GX head for playback x 2 Erase head x 2
Motors	AC Servo motor for capstan drive x 1 AC Eddy current motor for reel drive x 2
Tape Speed	19 cm/s ±0.8% (7-1/2 ips.) 9.5 cm/s ±1.0% (3-3/4 ips.)
Wow & Flutter	Less than 0.03% WRMS at 19 cm/s Less than 0.04% WRMS at 9.5 cm/s
Tape Winding Time	75 sec. using 360 m (1,200 ft.) Tape
Frequency Response	25 to 33,000 Hz ±3 dB at 19 cm/s 25 to 26,000 Hz ±3 dB (0 VU) 25 to 25,000 Hz ±3 dB at 9.5 cm/s 25 to 15,000 Hz ±3 dB (0 VU)
Signal to Noise Ratio	Better than 65 dB (19 cm/sec dbx switch: OFF)
Dynamic Range	128 dB (dbx switch: ON, 1 kHz, peak recording level)
Harmonic Distortion	Less than 0.4% at 19 cm/s
Input	MIC: 0.25 mV Required microphone impedance: 600 ohms Line: 70 mV
Output	Line: 410 mV Phone: 1.3 mW
Power Requirements	110V/120V/220V/240V, 50/60 Hz switchable
Dimensions	440(W) x 493(H) x 256(D) mm (17.3 x 19.4 x 10.1 inches)
Weight	23.2 kg (51.0 lbs)

STANDARD ACCESSORIES

Empty Reel	1
Connection Cords	1 set
Sensing Tape Kit	1
Reel Adaptor	2
Operator's Manual	1

* For improvement purposes, specifications and design are subject to change without notice.
* dbx is a trademark of dbx Incorporated.


REC LEVEL
Bias Oscillator
BIAS ADJ
ERASE
Trase Head
Mic. Amp.
Line Amp.
MIC
Rec. Amp.
dbx type I Processor (Encoder)
MIC
REC
Rec. GX head
EQ
LINE IN
LINE
SOURCE
dbx Switch
TAPE MONITOR
TAPE
Playback Amp.
OUTPUT / PHONES
dbx type I Processor (Decoder)
PLAY BACK
LINE OUT
Playback GX head.
EQ
Headphone Amp.
PHONES
VU Meter
Meter Amp.
Power Supply